

Aug. 27, 1929.

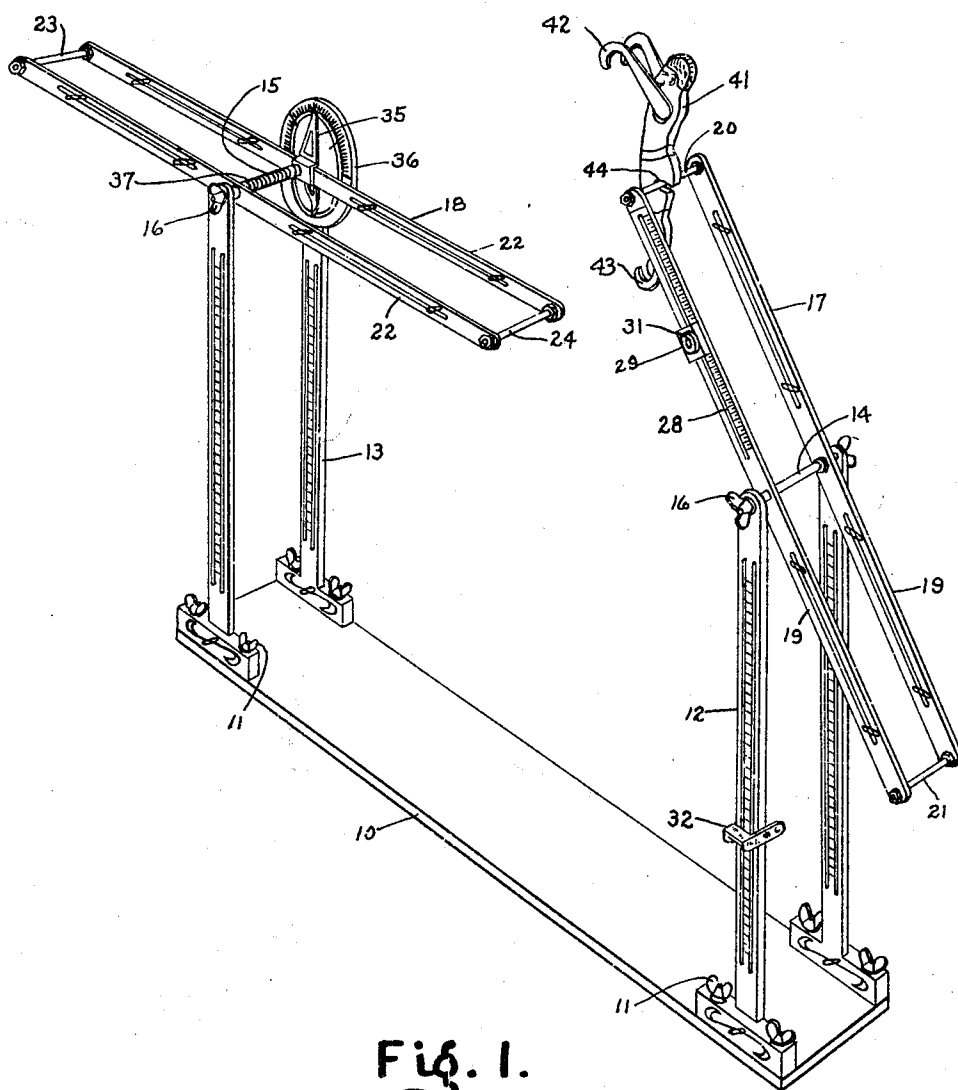
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1,725,870

TOY

Filed May 14, 1927

2 Sheets-Sheet 1



WITNESSES:

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2 Sheets-Sheet 2

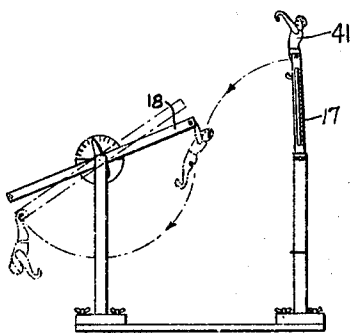


Fig. 2.

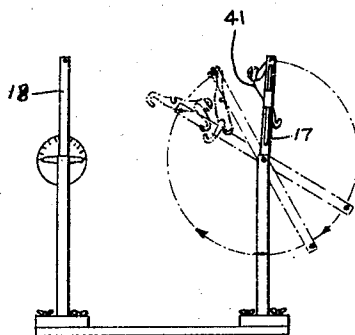


Fig. 5.

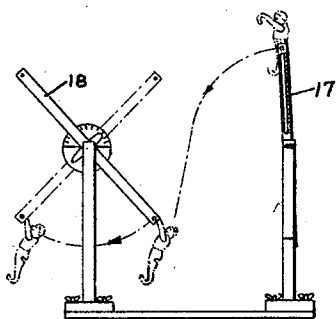


Fig. 3.

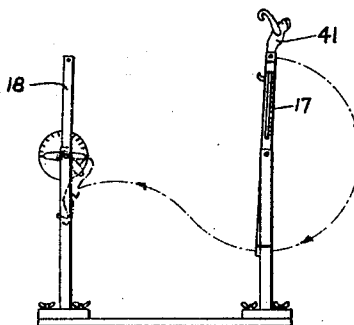


Fig. 6.

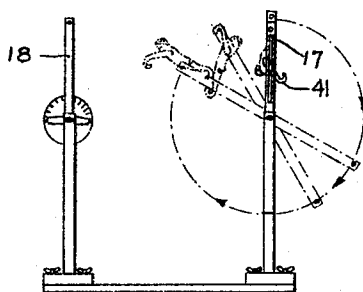


Fig. 4.

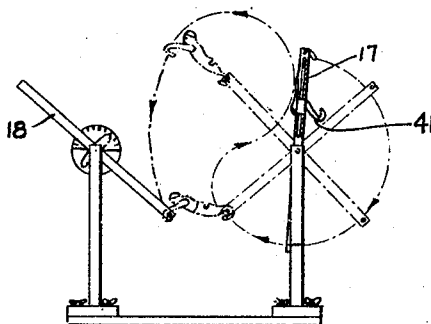


Fig. 7.

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UNITED STATES PATENT OFFICE.

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TOY.

Application filed May 14, 1927. Serial No. 191,484.

My invention relates to toys, especially to toys of the mechanical type and it has for an object to provide apparatus of the character designated which shall have both entertaining and educational qualities as well as qualities for developing both the reasoning powers and the inventive faculties of juvenile operators. The invention has for a further object to provide a form of toy which shall be capable of reproducing, in a mechanical way, an almost infinite number of various gymnastic stunts usually performed by acrobats or gymnasts with the aid of rotatable trapeze apparatus.

These and other objects, which will be made apparent throughout the further description of my invention, may be attained by the employment of the apparatus hereinafter described and illustrated in the accompanying drawings in which:

Fig. 1 is a perspective view of one form of toy arranged in accordance with my invention and Figs. 2 to 7, inclusive, are diagrammatic illustrations of some of the various stunts which the toy shown in Fig. 1 is capable of reproducing.

It has heretofore been proposed to construct toys of the acrobatic type in which an object representing a circus performer or acrobat is catapulted through space in such a manner as to be thrown or hooked upon some receiving object, such as a trapeze, in order to reproduce some gymnastic stunt such as a flying somersault, et cetera. A toy of this character, however, is apt to lose the interest of its juvenile operator in a relatively short period of time because of the fact that the toy is capable of reproducing only a single stunt.

I have therefore conceived of a form of toy which is capable of reproducing over fifty different acrobatic stunts. By its use, the initiative and originality of the juvenile operator are constantly being exercised so that the toy retains its attractiveness indefinitely and the element of amusement derived from its use is maintained.

Briefly speaking, my toy comprises a base board upon which are mounted two rotatable trapeze structures. A figured object representing an acrobat is provided, the acrobat being capable of engaging either trapeze with his hands, with his feet or by sitting thereon. The figured object is placed upon an upper cross-bar of one of the trapeze structures in

any desired position while the other trapeze structure is adjusted to a certain angular position. An adjustable biasing weight is provided for governing the inertia of movement of the first trapeze structure. Upon this trapeze structure being moved angularly, the object becomes detached therefrom and is thence either reattached to the same trapeze structure in a different position or is thrown through space to the second trapeze structure. After reattaching itself to one of the trapeze structures the object performs various stunts in accordance with its original position on the first trapeze structure, the setting of the biasing weight and the initial angular position on the second trapeze structure. Any number of different tricks may be reproduced employing either both trapeze structures or the first trapeze structure singly, as will presently be described.

Referring to the drawings for a more detailed description of my invention, I show in Fig. 1 a base board 10 to which are detachably secured, as by wing bolts 11, first and second vertical supporting standards 12 and 13. Secured in the upper ends of each standard are center pins 14 and 15 secured in place axially by suitable means, such as wing nuts 16. Upon the center pins 14 and 15, first and second trapeze structures 17 and 18 are rotatably supported. The first trapeze structure 17 is composed of side members 19 and end cross-bars 20 and 21 while the second trapeze structure is composed of side members 22 and end cross-bars 23 and 24.

The first trapeze structure 17 has a longitudinally extending slot 28 located in one of the side members 19, the slot being graduated preferably as shown in the drawing. A biasing weight 29, movable radially inward and outward in the slot 28, is provided. The biasing weight 29 embodies a thumb screw 31 for retaining it in any desired location or for permitting its entire removal from the trapeze structure 17, should it be so desired. Pivotally secured to the standard 12 is a releasing catch 32 which is arranged to retain the trapeze structure 17 in substantially a vertical position until such time as the catch is moved to clear the side member 19, whereupon the trapeze structure 17 is free to commence its angular movement.

The second trapeze structure 18 is provided with a fixed pointer 35 adapted to move angu-

larly with the trapeze structure. Secured to the supporting standard 13 is a stationary dial 36 which is preferably graduated, as illustrated, for cooperating with the pointer 5 35 to indicate the angular position of the trapeze structure 18. A compression spring 37 is disposed about the center pin 15 for effecting some frictional resistance to movement between the standard 13 and the side 10 bars 22, whereby the trapeze structure 18 remains temporarily fixed in any desired angular position.

An object 41, preferably shaped as illustrated to represent a performer, is provided. 15 The object embodies hooked hands and feet 42 and 43 as well as a notch 44 located above its center of gravity. The hands and feet 42 and 43 as well as the notch 44 are all adapted to engage either of the cross-bars 20 to 24, 20 inclusive, or the center pins 14 and 15.

From the foregoing description, the operation of my novel form of toy will be apparent. The trapeze structure 17 is first located in substantially a vertical position, being retained by the catch 32. The weight 29 25 is then either entirely removed from the trapeze structure 17 or is adjusted radially inward or outward in accordance with the trick it is desired to perform. The object 41 is then positioned upon the cross-bar 20 either 30 by means of its hands 42 or by its feet 43 or by the notch 44, while it may also be arranged to face either toward or away from the second trapeze structure 18, all in accordance 35 with the trick it is desired to perform. The second trapeze structure 18 is then adjusted to a predetermined angular position after which the catch 32 may be released.

Upon release of the catch 32, the weight of 40 the object 41 causes the trapeze structure 17 to move angularly, whereupon the position of the object relative to the trapeze structure becomes changed sufficiently to detach it and cast it through space to engage the cross-bar 45 24 of the second trapeze structure 18. The impact of the object causes the second trapeze structure 18 to move angularly, causing changes in the relative position between it and the object, various stunts being performed in this way. Thereafter, the object 50 is again returned to the cross-bar 20, whence the same trick may be repeated or another trick performed by making the necessary adjustments of the weight 20 and the positions of the object and the second trapeze 55 structure. It will be apparent that, in case it should be desired to perform a trick solely upon the first trapeze structure 17, then the angular positioning of the second trapeze 60 structure 18 is not involved.

An extraordinary number of different stunts can be performed. Referring now to Figs. 2 to 7, inclusive, Fig. 2 depicts a stunt 65 in which the object initially sits upon the upper bar of the first trapeze structure. Up-

on release of the trapeze structure 17 and consequent angular movement thereof, the object is transferred to a cross-bar of the second trapeze structure 18, causing the latter 70 to be displaced angularly. The velocity of angular movement is sufficient to swing the object to an inverted position whereupon it engages the same cross-bar with its feet.

In Fig. 3, the second trapeze structure is located in an initial angular position somewhat different from that shown in Fig. 2 and 75 the object is dropped through space to engage the cross-bar of the second trapeze structure 18 with its hands, remaining in this position during oscillatory movement thereof. 80

Figs. 4 and 5 illustrate tricks which are performed solely upon the first trapeze structure 17. In Fig. 4, the object initially hangs 85 by its feet from the upper cross-bar. Consequent angular movement of the trapeze structure causes the object to release its foothold and to slide across the cross-bar, after which it regains its hold upon the same cross-bar by engaging it with its hands.

In Fig. 5, the reverse of that shown in Fig. 90 4 is accomplished in that the object initially retains the cross-bar by its hands and ultimately by means of its feet. Subsequent oscillations of the trapeze structure may effect 95 any number of such changes, the object alternately gripping the cross-bar with its feet and hands.

In Fig. 6, the object first sits upon the trapeze structure and is then thrown in the direction illustrated to engage the center pin 100 of the trapeze structure 18 with its hands.

In Fig. 7, the object is first suspended by its feet from the trapeze structure 17 after which it travels almost through a complete circle 105 with the trapeze structure 17 until the latter loses its momentum and begins to move in the opposite direction, the reversal of movement causing the object to be swung completely about the cross-bar after which it falls with 110 the trapeze structure 17 and engages the cross-bar of the trapeze structure 18 with its hands. In other words, at the termination of the stunt, the object is engaging both trapeze structures.

As stated heretofore, Figs. 2 to 7 are merely 115 illustrative of a very small percentage of the tricks which my toy is capable of performing. Only the simplest forms of tricks have been diagrammed because of the difficulties which would be encountered in depicting 120 stunts in which the movements or gyrations of the object are involved or somewhat intricate. While I have shown a form of toy which embodies two trapeze structures, nevertheless it is to be understood that it is within 125 the purview of my invention to dispense with the second trapeze structure 18 and to provide only the first trapeze structure 17 together with the object and supporting structure. It is further apparent that the object 130

may assume various shapes or depict characters other than that illustrated without departing from the spirit of my invention.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various other changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are imposed by the prior art or as are specifically set forth in the appended claims.

What I claim is:

1. In a toy, the combination of a rotatable member having axially-extending bars, an object representing a performer having means for freely attaching itself to one of the bars and so formed as to become detached therefrom upon angular movement of the member, and adjustable means carried by the angularly movable member for varying the angular velocity of the member so as to cause the object to be detached therefrom in various ways.

2. In a toy, the combination of a rotatable member movable about a horizontal axis and having axially extending bars, an object representing a performer and having means for freely attaching itself to one of the bars and so formed as to become detached from the bar upon angular movement thereof, and an adjustable weight provided on the rotatable member for varying the angular velocity of the member for causing the object to be detached therefrom in various ways.

3. In a toy, the combination of an angularly movable member having a radially extending structure and an axially extending bar secured thereto, said bar being movable about a horizontal axis, an object representing a performer having means for freely attaching itself in different positions to the bar and so formed as to become detached from the bar upon angular movement of the member, and a weight associated with the radially extending structure, said weight being adjustable radially inward and outward for varying the inertia of movement of the member, whereby the object is detached and reattached to the bar in various ways in accordance with the position of the weight and the original position of the object relative to the bar.

4. In a toy, the combination of an angularly movable member having a radially extending structure for supporting an axially extending bar, an object representing a performer having a plurality of means for attaching itself to the bar and so formed as to change its position relative to the bar upon movement of the bar, structural means for retaining the member in a predetermined angular position, and adjustable means embodied in the member for varying the angular velocity of the member,

whereby upon release of the retaining means and consequent angular movement of the member, the manner in which the object changes its position relative to the bar is varied.

5. In a toy, the combination of an angularly movable first trapeze member embodying a radially extending supporting member and an axially extending bar, means for initially locating the bar in a position disposed above its axis of rotation, a second trapeze member having an axially extending bar, means for adjusting said bar to any predetermined angular position relative to the first trapeze member, and an object representing a performer and having means for freely attaching itself in various positions to the bar of the first trapeze member, said object being so formed that upon sufficient rotational movement of the first member, said object may be attached in various ways to the bar of the second trapeze member as determined by the original position of the object upon the first trapeze member and the angular position of the second trapeze member.

6. In a toy, the combination of a first trapeze member embodying a radial supporting member and an axially extending bar, said trapeze member being adapted to be moved angularly, a second trapeze member disposed in spaced relation thereto, an object representing a performer having means for freely attaching itself to the bar of the first trapeze member and formed so as to be cast therefrom to the second trapeze member upon angular movement of the first trapeze member, and a weight associated with the first trapeze member, said weight being adjustable radially inward and outward so as to alter the angular velocity of the first trapeze member, whereby the direction of travel assumed by the object in passing from the first to the second trapeze member is varied.

7. In a toy, the combination of first and second trapeze members each movable angularly, an object representing a performer having means for freely attaching itself to the first trapeze member and so formed that, upon angular movement of said trapeze member, said object is transferred to the second trapeze member, means associated with the first trapeze member for varying its angular velocity, whereby the object is thrown differently from the first trapeze member, and means associated with the second trapeze member for indicating its angular position relative to the first trapeze member.

8. In a toy, the combination of first and second trapeze members each movable angularly, an object representing a performer having means for freely attaching itself to the first trapeze member and formed so that, upon angular movement of said trapeze member, said object, is transferred, at least in part, to the second trapeze member, and adjustable

weight provided on the first trapeze member for varying the angular velocity of the first trapeze member, and a dial for indicating the angular position of the second trapeze member relative to the first trapeze member.

9. In a toy, the combination of first and second balanced trapeze members each movable angularly, an object representing a performer having means for freely attaching itself to the first trapeze member and formed so that, upon angular movement of said trapeze member, said object is cast therefrom to be attached to the second trapeze member, adjustable means associated with the first trapeze member for varying its inertia of movement, means associated with the second trapeze member for indicating its angular position relative to the first trapeze member, and means for initially retaining the first member in substantially a vertical position.

10. In a toy, the combination of first and second trapeze members each embodying diametrical supporting members and axially extending cross-bars, a base member, means

for revolvably supporting each of the trapeze members in spaced relation upon the base member, an object representing a performer having a plurality of means for attaching itself in various positions to one of the cross-bars of the first trapeze member and adapted, upon angular movement of said trapeze member, to be attached to the second trapeze member, an adjustable weight associated with the first trapeze member for varying its inertia of movement, and a dial associated with the second trapeze member for adjusting it to any predetermined angular position, whereby the object is transferred in various ways from the first to the second trapeze member in accordance with the position of the weight and the angular adjustment of the second trapeze member as well as the initial position assumed by the object with respect to the first trapeze member.

In testimony whereof, I have hereunto subscribed my name this eleventh day of May, 1927.

ANDREW A. KUCHER.