

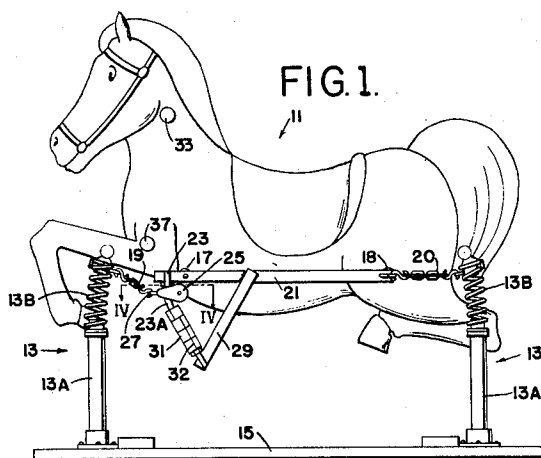
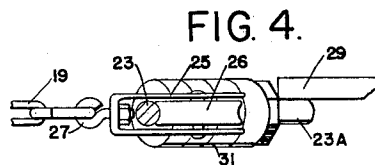
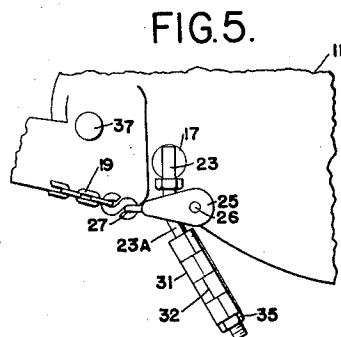
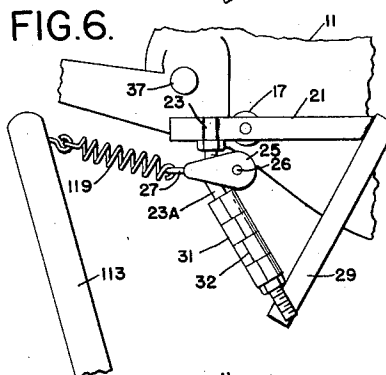
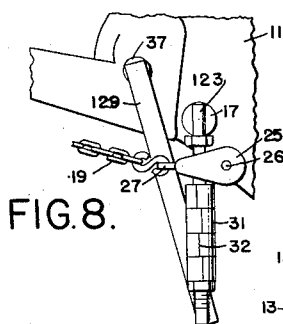
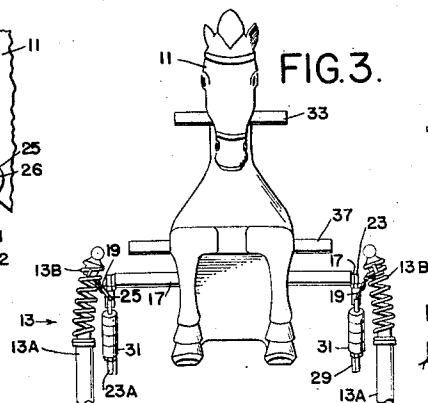
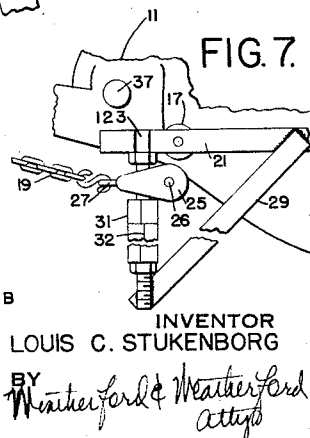
Sept. 8, 1959

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2,903,262

SPRING-SUPPORTED REARING TOY HORSE

Filed May 16, 1955



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2,903,262

SPRING-SUPPORTED REARING TOY HORSE

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14 Claims. (Cl. 272—52)

This invention relates to certain new and useful improvements in toy horses and the like, and particularly relates to new and useful improvements in toy horses of the types generally characterized as spring-supported, such as are represented for example by my copending application, Serial No. 487,047, filed February 9, 1955, and by Baltz Reissue Patent 23,849.

In prior spring-supported toy horses the horse or other toy animal body has been supported from a plurality of upstanding standards spaced away from the top animal body, with tension elements extending from the standards inwardly toward the animal body to effect connection therebetween, the standards and tension elements comprising supporting means for the animal body.

In the spring-supported types characterized by those mentioned above the supporting means have included a resilient section with the result that the toy animal bodies have been supported for a substantially universal motion of rocking and pitching in an infinite variety of directions, but being so limited as to be incapable of rearing upwardly to an accentuated position of angularity. It has been found, particularly in view of the tendency of children to pretend their identities with well-known characters, and the prevalence of many horse riding characters, such as those of numerous television and motion picture productions, who frequently cause their steeds to rear up, sometimes accompanied by triumphant shout, that the childish viewers have frequently been disappointed when their spring-supported horses manufactured in accordance with prior practice have proven incapable of accomplishing so exciting a rearing movement.

The present invention is directed to the solution of this problem, and in particular provides means by which an upward accentuated rearing movement may be imparted to the toy animal body by its rider, accomplishing a close simulation of the desired rearing, imitating live horse motions such as those of the motion picture and television horses. This movement has further been accomplished through the means of the present invention, which, as is pointed out hereinabove, are equally applicable to either of the types of spring-support referred to hereinabove, yet which permit the accomplishment of this movement without causing overturning of the toy animal, maintaining the center of gravity of the animal well within the supporting limits of the supporting means.

The principal object of the present invention is to provide a spring-supported toy horse in which the body of the horse may be caused to rear by its rider.

A further object of the invention is to provide a spring-supported toy horse, which comprises a horse body, a plurality of upstanding standards, and means coupling the body to the standards, including tension means and coupler means interposed for engagement by the tension means to provide for relative upward movement of the horse body relative to the coupling means.

A further object of the invention is to provide in

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combination with a toy horse, upstanding standard means, flexible tension means connected to the standard means, and a depending coupler connected with the horse body, the tension means slidably and shiftably engaging the coupler member.

A further object of the invention is to provide a coupler member with removable cushion-like limit means for regulating the relative length of movement of the tension means along the coupler member.

A further object of the invention is to provide a rearing toy horse; and

A further object of the invention is generally to improve the design, construction and efficiency of spring-supported toy horses.

The means by which the foregoing and other objects of the present invention are accomplished and the manner of their accomplishment will be readily understood from the following specification upon reference to the accompanying drawings, in which:

Fig. 1 is a side elevational view of a preferred embodiment of the present invention applied to one type of spring-support for a toy animal body, in normal or rest position.

Fig. 2 is a side elevational view of the spring-supported body of Fig. 1 in upwardly reared condition, and further illustrating features of the invention.

Fig. 3 is a front view of the device of Fig. 1 with certain parts broken away.

Fig. 4 is a fragmentary sectional plan view taken as on the line IV—IV of Fig. 1, on an enlarged scale.

Fig. 5 is a similarly enlarged fragmentary elevational view illustrating a modification in the invention.

Fig. 6 is a view similar to Fig. 5 illustrating the invention in conjunction with another type of supporting means.

Fig. 7 is a view similar to Fig. 5 of a further modification in the invention; and

Fig. 8 is a view similar to Fig. 7 of a further modification in the invention.

Referring now to the drawings in which the various parts are indicated by numerals, the present invention comprises an animal body 11, which, as illustrated, is preferably in the form of a horse. The body 11 is a spring-supported body suspended for substantially universal rocking and pitching motions in a variety of directions.

In one form, the device is illustrated, as shown for example in Fig. 1, as supported from a plurality of upstanding standards 13 including a pair of forward standards and a pair of rear standards which are mounted at their lower ends to a suitable pedestal 15 and are spaced outwardly from body 11. The specific standards 13 are substantially like those shown and described in my copending application, Serial Number 487,047, filed February 9, 1955, and comprise an upright rigid section 13A, and a superposed resilient section 13B. The horse body 11 may include the conventional front dowel means 17 and rear dowel means 18 which extend outwardly from the opposite sides of the body and are provided to receive tension means for connecting the body to standards 13. Forward standards 13 are positioned forward and outward of front dowel means 17 and the rear standards are rearward and outward of rear dowel means 18.

In the preferred embodiment of the present invention, as illustrated in Figs. 1, 2 and 3, tension elements 19, 20, which are preferably flexible and illustrated as in the form of claims are respectively connected to the upper ends of front and rear standards 13, and extend somewhat diagonally inwardly toward the outer ends of dowels 17, 18. A bar 21 is rigidly secured to and extends between the outer ends of the dowels 17, 18, spaced from

one side of body 11, and a similar bar is secured to the opposite outer ends of dowels 17, 18, spaced from the opposite side of the body. A depending rigid coupler member 23 is rigidly fixed at its upper end to each of the bars 21, adjacent the forward bar end, coupler 23 extending therebelow so as to depend somewhat below the level of the horse body 11 and below the level of the outer ends of dowel means 17. Preferably coupler 23 is a rod-like element and is rearwardly curved as at 23A. A slide, preferably a small pulley block 25, is slidably and shiftably mounted on coupler 23, with the pulley 26 of the pulley block engaging the rearward surface of the coupler. Forwardly the pulley block 25 is provided with an eye 27, and the inner end of the forward tension element 19 is connected to the pulley block eye, thus connecting the inner end of the forward tension elements respectively to the depending couplers 23 and thereby effecting connection of the tension means 19 to the horse body 11. The rearward tension elements 20 are connected to the bar 21 adjacent rear dowel means 18. Preferably for the purpose of bracing the respective couplers 23, a diagonal brace 29 extends from the lower end of coupler 23 to an intermediate point on bar 21, and is rigidly connected to the coupler and to the bar so as to effect bracing of the depending coupler. A plurality of cushion-like pads 31, which are preferably formed of rubber or similar resilient material, are removably mounted upon the coupler 23, the pads 31 being preferably split as at 32 so as to provide for the removal of the pads from the coupler as desired. The pads 31 underlie the pulley block 25 by which the sliding and shifting connection of the forward tension element is effected to the coupler and serve to limit the relative movement of the pulley block along the depending coupler. It will readily be seen that upon the removal of one or more of the rubber pads a greater length of relative movement of the pulley block along the depending coupler may be accomplished.

As can further be seen the horse body 11, as shown in Fig. 1, is resiliently supported for movements in substantially universal directions of rocking and pitching, but it is further to be observed that in the use of the device the rider or user thereof may, by effecting an upward pull of the handle bars 33, cause the body 11 to be reared upwardly as to the position shown in Fig. 2, the depending couplers 23 being moved upwardly through pulley block 25 until the pulley block has reached the lower limit of movement, at which time the upward rearing motion is stopped. Subsequently the horse body will return to the position as of Fig. 1 by gravity under shift of weight of the rider of the body.

The curve 23A in the depending coupler 23 is useful in many conditions to accommodate the coupler to the pulley block or similar slide attachment means under the somewhat radial swinging movement of the body 11 during elevation of the body to the accentuated reared position of angularity relative to the horizontal. It will be observed that in such movement body 11 substantially pivots about the rear dowel means 18. This movement is not an exactly radial movement since under the force necessary for elevating the body to the accentuated position the rear dowel means move somewhat downwardly, the resilient portions of the supporting means yielding to permit such movement.

In Fig. 5 a modification of the invention is illustrated, in which the depending coupler 23 is secured directly to the forward dowels 17 and depends therefrom. In this form of the device a stop 35, which may be in the form of a nut threadedly engaged thereon, is mounted on the lower end of coupler 23 and serves to retain the rubber pads 31 and to cooperate therewith when present on the coupler to limit the relative movement of the coupler through the sliding connection to the tension element 19. As is apparent a sliding and shifting connection between the inner end of forward tension ele-

ments 19 and couplers 23 substantially identical to that already described is effected. It will be observed that in this modification of the invention the bar 21 is diagonal brace 29 are omitted, it being found under some circumstances that the structure of Fig. 5 is preferable. In the employment of the structure of Fig. 5 the rear tension means 20 may be coupled directly to rear dowel means 18, as for example in the manner shown in my copending application, Serial Number 487,047.

In Fig. 6 the invention is illustrated as employed in connection with another type of support similar to the support means shown in Baltz Reissue Patent 23,849. It will be observed that the support consists of an up-standing substantially rigid standard 113 which is illustrated as disposed at an angle of inclination from the vertical. Adjacent the upper end of standard 113 one end of a flexible tension element 119 is connected, the element 119 being illustrated as in the form of a tension spring extending inwardly from standard 113 toward body 11, and having its opposite end connected to the eye 27 of pulley block 25, which, in manner similar to that already described, is shiftably and slidably mounted upon the coupler 23 depending from bar 21, the pulley block, coupler, bar, diagonal brace, and rubber pads, being substantially identical with those shown and described with reference to Figs. 1 to 4, inclusive.

It will be understood that the coupler 23 may be mounted, if desired, in the manner shown in Fig. 5 for use in connection with the spring element 119 as shown in Fig. 6.

Referring now to Fig. 7, the device as there illustrated shows a further modification in the coupler in which a coupler 123, which is preferably in the form of a substantially vertically disposed depending rod-like section, is connected adjacent the forward end of a bar 21, the bar 21 being mounted to the animal body 11 in manner similar to that already described with reference to Figs. 1 to 4. Preferably coupler 123 is provided with a diagonal brace similar to the diagonal brace 29 heretofore referred to. Preferably, as in the manner already described, a tension element 19 is connected to a pulley block 25 which is shiftably and slidably mounted upon the coupler 123, the relative movement between the coupler 123 and pulley block 25 being limited by removable rubber pads 31 in the manner heretofore described.

A further variation of the invention is illustrated in Fig. 8, in which a coupler 123 is dependently connected to forward dowel means 17, and in the manner already described a flexible tension element 19 is connected to a pulley block 25 with the pulley block being shiftably and slidably mounted on the coupler, relative movement therebetween being similarly limited by rubber pads 31. In the modification shown in Fig. 8 a diagonal brace 129 is fixed to the lower end of coupler 123 and extends diagonally upwardly and inwardly therefrom, having its upper end rigidly fixed to the outer extremity of a foot rest 37. The diagonal brace 129 is provided when desired to additionally strengthen the depending coupler 123.

It thus will be seen that the present invention provides a means for shiftably and slidably connecting a flexible tension member to a supported toy animal body so as to provide for relative movement between the tension member and the animal body to permit the movement of the animal body to an accentuated position of angularity relative to the horizontal, particularly providing for the accentuated elevation of the forepart of the animal body so as to simulate the action of an animal as in rearing upwardly in the manner desired. It will be seen that in normal or rest position the animal body is supported substantially horizontally and in virtue of the resilient means included in the supporting means therefor is enabled to rock and pitch in a manner normally understood to accompany spring-supported toy animals of this general

class. The flexible tension elements are so connected to the depending couplers as to prevent downward relative movement of the supported animal body below normal supported position so as to bring the resilient portions of the supporting means into action to provide for the desired rocking and pitching. Similarly, as can readily be seen, the upward movement of the animal body under the additional force which may be exerted thereon by the user may be accurately limited to a desired length of such movement by the placing or removal of removable limit means, preferably in the form of the rubber pads 31, mountable on the couplers.

I claim:

1. In a spring-supported toy, a body, means supporting said body for rocking and pitching, said supporting means including standards spaced outwardly from said body, forward and rearward tension means connected with said standards and extending inwardly toward said body, coupler means connected with said body adjacent the forward portion of said body, said coupler means including a relatively elongated depending section, pulley means shiftably and slidably mounted on each said coupler section, said section being reciprocably shiftable relative to said pulley means, said forward tension means being attached to said pulley means to connect said body to said standards, whereby to support said body for relative upward movement to an inclined position of accentuated angularity relative to the horizontal for simulation of the rearing motion of an animal, and limit means mounted on said coupler means for limiting relative movement between said coupler means and said pulley means.

2. In a spring-supported toy, a body, means supporting said body for rocking and pitching, said supporting means including standards spaced outwardly from said body, forward and rearward tension means connected with said standards and extending inwardly toward said body, coupler means connected with said body adjacent the forward portion of said body, said coupler means including a relatively elongated depending section, pulley means shiftably and slidably mounted on said coupler section, said section being reciprocably shiftable relative to said pulley means, said forward tension means being attached to said pulley means to connect said body to said standards, whereby to support said body for relative upward movement to an inclined position of accentuated angularity relative to the horizontal for simulation of the rearing motion of an animal, and limit means removably mounted on said coupler means for limiting relative movement between said coupler means and said pulley means.

3. In a spring-supported toy, a body, means supporting said body for rocking and pitching, said supporting means including standards spaced outwardly from said body, forward and rearward tension means connected with said standards and extending inwardly toward said body, coupler means connected with said body adjacent the forward portion of said body, said coupler means including a rearwardly curved, relatively elongated, depending section, pulley means shiftably and slidably mounted on said coupler section, said section being reciprocably shiftable relative to said pulley means, said forward tension means being attached to said pulley means to connect said body to said standards, whereby to support said body for relative upward movement to an inclined position of accentuated angularity relative to the horizontal for simulation of the rearing motion of an animal, and limit means removably mounted on said coupler means for limiting relative movement between said coupler means and said pulley means.

4. In a spring-supported toy, a body, front and rear dowel means respectively projecting from opposite sides of said body, rigid bar means respectively spanning between and fixed to the outer ends of the front and rear dowel means along opposite sides of said body, a pair of forward standards positioned forwardly of and outwardly

from the opposite outer ends of said front dowel means, a pair of rear standards positioned rearwardly of and outwardly from the outer ends of said rear dowel means, tension means respectively connected to said rear standards and extending diagonally inwardly toward and being connected with said bar means adjacent said rear dowel means, additional tension means respectively connected to said front standards and extending diagonally inwardly toward said front dowel means, rearwardly curved, rigid, rod-like coupler means connected with and depending below said bar means adjacent said front dowel means, brace means fixed to said coupler means below said dowel means and fixed to said bar means, means slidably and shiftably connecting said additional tension means to said coupler means, said coupler means being upwardly shiftable relative to said additional tension means under upward pull exerted on said body, whereby said body assumes a position of angularity relative to the horizontal simulating the rearing motion of an animal, and means limiting said relative upward shift of said coupler means.

5. In a spring-supported toy, a body, front and rear dowel means respectively projecting from opposite sides of said body, a pair of forward standards positioned forwardly of and outwardly from the opposite outer ends of said front dowel means, a pair of rear standards positioned rearwardly of and outwardly from the outer ends of said rear dowel means, tension means respectively connected to said rear standards and extending diagonally inwardly toward said rear dowel means and being connected with said rear dowel means, additional tension means respectively connected to said front standards and extending diagonally inwardly toward said front dowel means, rigid, rod-like coupler means connected with and depending below said front dowel means, brace means fixed to said coupler means below said dowel means, means slidably and shiftably connecting said additional tension means to said coupler means, said coupler means being upwardly shiftable relative to said additional tension means under upward pull exerted on said body, whereby said body assumes a position of angularity relative to the horizontal simulating the rearing motion of an animal, and means limiting said relative upward shift of said coupler means.

6. In a spring-supported toy, a body, front and rear dowel means respectively projecting from opposite sides of said body, a pair of forward standards positioned forwardly of and outwardly from the opposite outer ends of said front dowel means, a pair of rear standards positioned rearwardly of and outwardly from the outer ends of said rear dowel means, tension means respectively connected to said rear standards and extending diagonally inwardly toward said rear dowel means and being connected with said rear dowel means, additional tension means respectively connected to said front standards and extending diagonally inwardly toward said front dowel means, rigid, rod-like coupler means connected with and depending below said front dowel means, pulley means slidably and shiftably connecting said additional tension means to said coupler means, said coupler means being upwardly shiftable relative to said additional tension means under upward pull exerted on said body, whereby said body assumes a position of angularity relative to the horizontal simulating the rearing motion of an animal, and limit means limiting said relative upward shift of said coupler means.

7. A device in accordance with claim 6 in which said limit means are removably mounted on said coupler means.

8. In a spring-supported toy, a body, front and rear dowel means respectively projecting from opposite sides of said body, a pair of forward standards positioned forwardly of and outwardly from the opposite outer ends of said front dowel means, a pair of rear standards positioned rearwardly of and outwardly from the outer ends of said rear dowel means, tension means respectively con-

nected to said rear standards and extending diagonally inwardly toward said rear dowel means and being connected with said rear dowel means, additional tension means respectively connected to said front standards and extending diagonally inwardly toward said front dowel means, rigid, rod-like coupler means connected with and depending below said front dowel means, and pulley means slidably and shiftably connecting said additional tension means to said coupler means, said coupler means being upwardly shiftable relative to said additional tension means under upward pull exerted on said body, whereby said body assumes a position of angularity relative to the horizontal simulating the rearing motion of an animal.

9. A device in accordance with claim 8, in which said tension means comprise tension spring members.

10. A device in accordance with claim 8, in which said coupler means comprise rearwardly curved members.

11. A device in accordance with claim 8, in which said standards each include a resilient section and said tension means is flexible.

12. In a spring supported toy, a body, rearward supporting means connected with a rearward portion of said body, forward supporting means adapted for connection with a forward portion of said body, each said supporting means including standard means and tension means, said standard means being spaced outwardly from said body and said tension means being connected to said standard means and extending inwardly toward said body, coupler means connected with the opposite sides of said body adjacent the forward portion of said body, said coupler means each including a relatively elongated depending section, slide means loosely embracing said coupler section for free sliding shift of said coupler means relative to said slide means, said forward tension means being attached to said slide means to link said body to the forward said standards, whereby to support said body for free relative upward movement to an inclined position of accentuated angularity relative to the horizontal for simulation of the rearing motion of an animal, and limit means removably mounted on said coupler means for limiting relative movement between said coupler means and said slide means.

13. In a spring supported toy, a body, rearward supporting means connected with a rearward portion of said body, forward supporting means adapted for connection with a forward portion of said body, each said support-

ing means including standard means and flexible tension means, said standard means being spaced outwardly from said body and said tension means being connected to said standard means and extending inwardly toward said body, at least a part of each said supporting means comprising resilient spring means, coupler means connected with the opposite sides of said body adjacent the forward portion of said body, said coupler means each including a relatively elongated depending section, slide means loosely embracing said coupler section for free sliding shift of said coupler means relative to said slide means, said forward tension means being attached to said slide means to link said body to the forward said standards, whereby to support said body for free relative upward movement to an inclined position of accentuated angularity relative to the horizontal for simulation of the rearing motion of an animal, and limit means mounted on said coupler means for limiting relative movement between said coupler means and said slide means.

14. In a spring supported toy, a body, rearward supporting means connected with a rearward portion of said body, forward supporting means adapted for connection with a forward portion of said body, each said supporting means including standard means and flexible tension means, said standard means being spaced outwardly from said body and said tension means being connected to said standard means and extending inwardly toward said body, at least a part of each said supporting means comprising resilient spring means, coupler means connected with the opposite sides of said body adjacent the forward portion of said body, said coupler means each including a relatively elongated depending section, slide means loosely embracing said coupler section for free sliding shift of said coupler means relative to said slide means, said forward tension means being attached to said slide means to link said body to the forward said standards, whereby to support said body for free relative upward movement to an inclined position of accentuated angularity relative to the horizontal for simulation of the rearing motion of an animal.

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