C. E. MORRIS.

CAROUSEL.

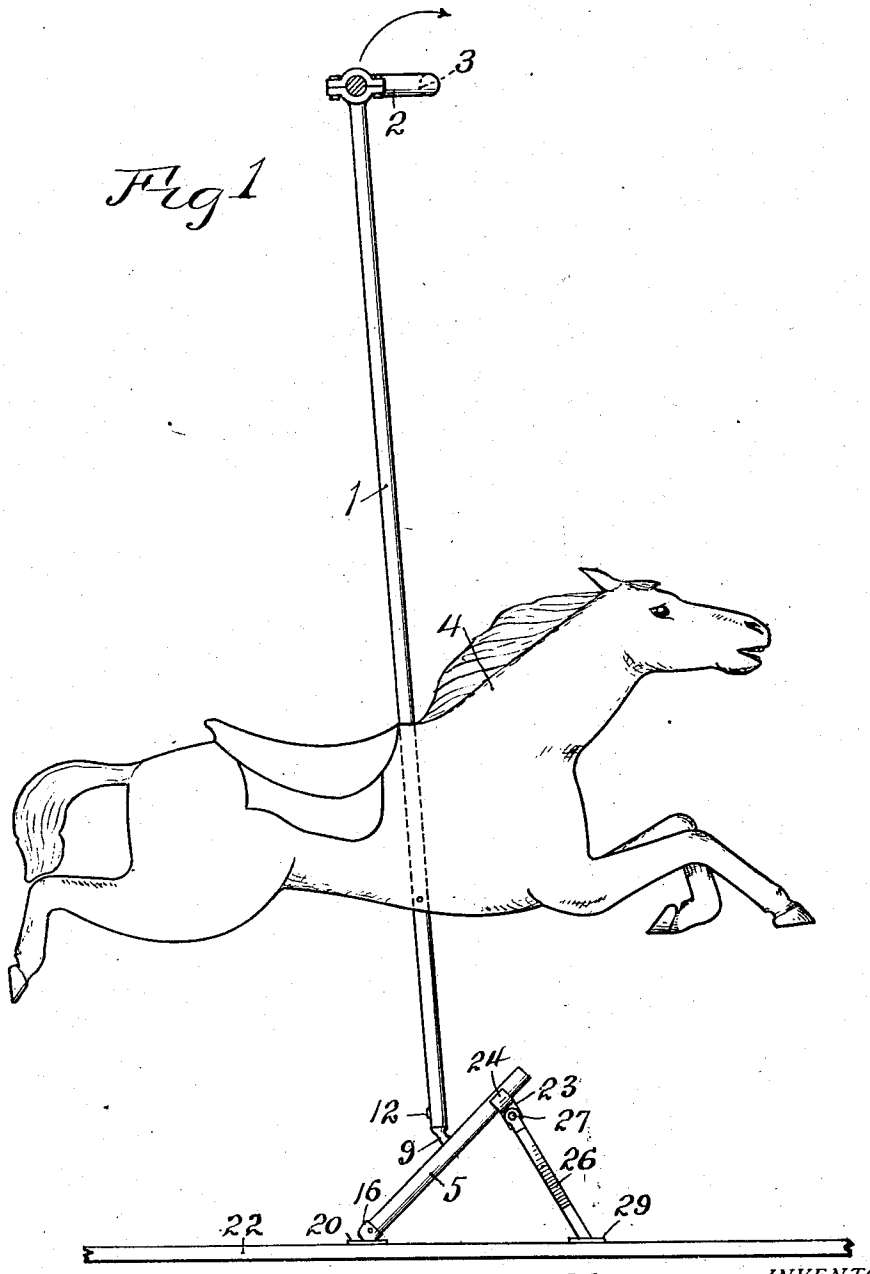
APPLICATION FILED FEB. 21, 1917.

1,286,716.

Patented Dec. 3, 1918.

2 SHEETS—SHEET 1.

Fig 1




WITNESS:

R. C. Hamilton

INVENTOR.

Charles E. Morris.

BY

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His ATTORNEY

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2 SHEETS—SHEET 2.

Fig 2

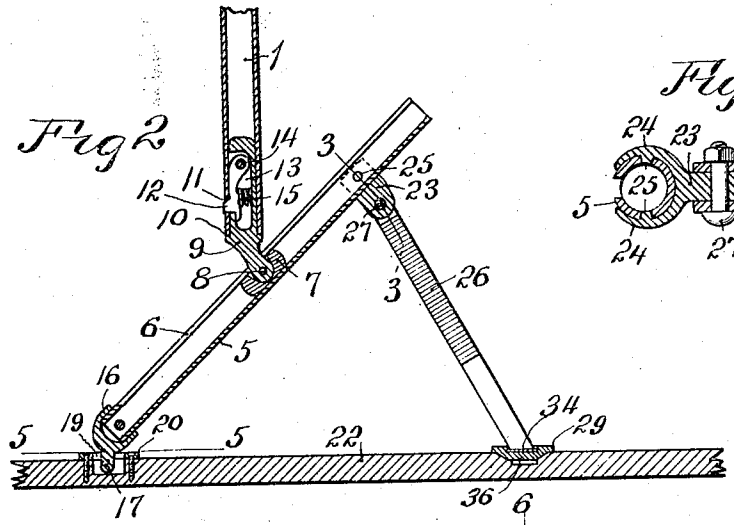



Fig 3

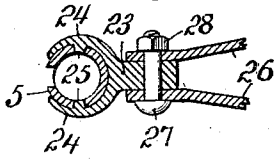
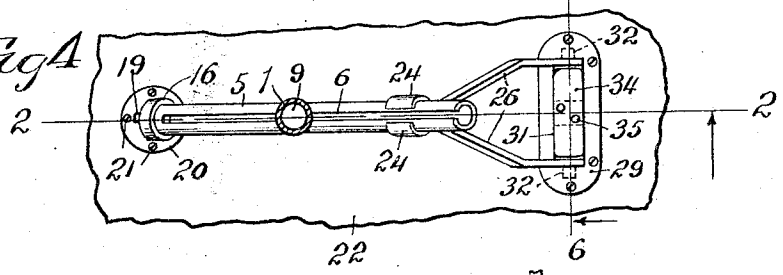



Fig 4



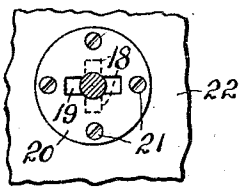




Fig 5

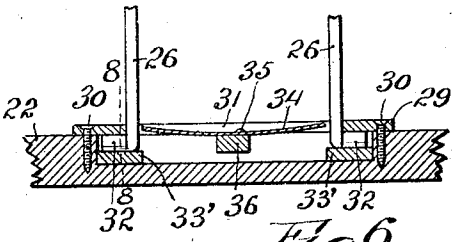



Fig 6

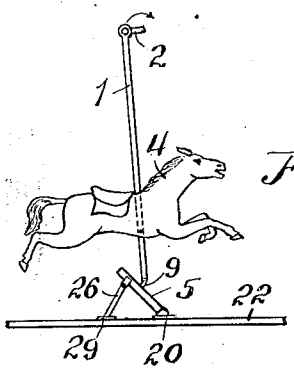



Fig 7

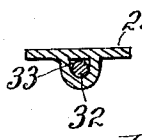



Fig 8

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# UNITED STATES PATENT OFFICE.

CHARLES E. MORRIS, OF LEAVENWORTH, KANSAS, ASSIGNOR TO CHARLES W. PARKER, OF LEAVENWORTH, KANSAS.

## CAROUSEL.

1,286,716. Specification of Letters Patent. Patented Dec. 3, 1918.

Application filed February 21, 1917. Serial No. 150,243.

*To all whom it may concern:*

Be it known that I, CHARLES E. MORRIS, a citizen of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented a certain new and useful Improvement in Carousels, of which the following is a specification.

My invention relates to improvements in carousels.

The object of my invention is to provide novel means by which motion may be imparted to a seat or support for a person riding on a carousel or a merry-go-round.

My invention is particularly well adapted for imparting a life-like galloping movement to an artificial animal, such as a horse, carried on a carousel and adapted to support a person.

A further object of my invention is to provide a simple, cheap, strong, durable and efficient guiding means for the lower end of an upwardly and downwardly reciprocative seat support of a carousel.

Still another object of my invention is the provision of guiding means for a seat support of the kind described, which may quickly be assembled in or disassembled from its operative position by an unskilled person.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings which illustrate my invention,

Figure 1 is a side elevation of the preferred embodiment of my invention, shown attached to a seat support and to the platform of a merry-go-round or carousel, a portion of which is shown.

Fig. 2 is an enlarged vertical sectional view on the line 2—2 of Fig. 4.

Fig. 3 is an enlarged sectional view on the line 3—3 of Fig. 2.

Fig. 4 is an enlarged plan view of my improved guiding mechanism, the seat supporting tube being shown in cross section.

Fig. 5 is an enlarged horizontal sectional view on the line 5—5 of Fig. 2.

Fig. 6 is a vertical sectional view on the line 6—6 of Fig. 4, enlarged.

Fig. 7 is a reduced elevation of the parts shown in Fig. 1, the guiding means for the lower end of the seat support being shown in a position diametrically reverse to that of Fig. 1.

Fig. 8 is a cross section on the line 8—8 of Fig. 6.

Similar reference characters designate similar parts in the different views.

1 designates the usual upwardly and downwardly extending seat support comprising a tube which has its upper end pivoted to a crank 2 of a horizontal rotary shaft 3, such as is ordinarily employed for vertically reciprocating the rod which supports a seat for a person, such as an artificial horse 4.

In order that the horse 4 may have imparted to it a tilting as well as an upward and downward movement, so as to simulate the movement of a galloping horse, I provide the following described guiding means for the lower end of the tubular member 1.

5 designates an inclined guide, preferably stationary, and preferably comprising a tube having in its upper side a longitudinal slot 6.

Slidably mounted in the guide tube 5 is a guide member 7, to which is pivoted by means of a horizontal pin 8, a guide member 9 which is detachably slidably fitted in the lower end of the tubular member 1, the lower edge of which bears against an annular peripheral shoulder 10 on the member 9.

For releasably securing the member 9 in the tubular member 1, the latter is provided with a hole 11, through which extends a latch 12 located in a recess 13 provided in one side of the member 9, to which the latch 12 is pivoted at its upper end by means of a transverse pin 14.

A coil spring 15 having one end bearing against the inner vertical side of the latch 12, and having its other end bearing against the member 9, normally forces the latch 12 to a position in which it will enter the hole 11 so as to lock the member 9 in the tubular member 1. By inwardly moving the lower end of the latch 12, it may be released from the tubular member 1, upon which the member 9 may be readily withdrawn from said tubular member.

Upon forcing the member 9 into the lower

end of the tubular member 1, the latch 12 will be forced by the spring 15 into the hole 11, thereby locking the two members together.

The lower end of the tubular member 5 is provided with a cap 16 having a downwardly extending portion 17 having two diametrically opposite laterally extending arms 18, Fig. 5, which are adapted, when the member 5 is revolved with the portion 17 as an axis to a position at right angles to that shown in Figs. 2 and 4, to be in alinement with and insertible through a slot 19 provided in a supporting plate 20, which is secured by screws 21 in a horizontal position to the upper side of the platform 22 of the carousel.

After the arms 18 have been inserted through the slot 19 and the guide member 5 has been turned to the position shown in Figs. 2 and 4, the arms 18 will engage the under side of the plate 20 and prevent the accidental detachment of the guide member 5 from said plate.

For rigidly supporting the tubular guide member 5 in the stationary inclined position, it has secured to it, adjacent to its upper end, a clip 23 provided at one end with two curved arms 24 which embrace the guide member 5. Each arm 24 may be provided on its inner side with a projection 25 adapted to be fitted in a hole provided therefor in the adjacent side of the member 5. The clip 23 may be of malleable iron or other sufficiently pliable material, which will permit the spreading apart of the arms 24 sufficiently to enable the clip to be slid onto the member 5 to the proper position, after which the arms 24 may be forced to a position in which they will clamp the member 5 with the projections 25 inserted in the holes provided therefor.

Two inclined, preferably resilient, brace members 26 are secured at their upper ends to opposite sides respectively of the clip 23, to which the brace members are pivotally secured by means of a transverse bolt 27 which extends through said brace members 26, and which also extends through the clip 23 and is provided with a nut 28 bearing against the outer side of one brace member 26, the head of the bolt bearing against the outer side of the other brace member.

Referring particularly to Figs. 4 and 6, 29 designates a horizontal supporting plate secured by screws 30 to the upper side of the platform 22. The plate 29 is provided with a slot 31, through which the lower ends of the brace members 26 are adapted to be inserted.

Each brace 26 is provided with a lateral outwardly extending arm 32 which is adapted, when the brace members 26 are in the position shown in Figs. 4 and 6, to enter a hole 33 provided in the plate 29, see Fig. 8. The plate 29 is provided with two bearing portions 33′, which extend inwardly beyond the adjacent edges of the slot 31 and serve as supports for the lower ends of the brace members 26.

For releasably holding the brace members 26 in the operative spread apart position, shown in Figs. 4 and 6, a flat spring plate 34 is rigidly secured at its central portion by rivets 35 to a bridge portion 36 with which the plate 29 is provided in the center of the slot 31, see Fig. 6.

The free ends of the spring plate 34 are disposed adjacent to the inner sides respectively of the brace members 26, and hold said brace members in the operative position. By depressing the free ends of the spring plate 34 below the ends of the resilient brace members 26, the latter may be forced toward each other sufficiently to enable the arms 32 passing upwardly through the slot 31, thereby releasing the brace members 26 from the plate 29.

In the operation of my invention, when the crank 2 is rotated the member 1 will be reciprocated upwardly and downwardly and the guide member 7 will be reciprocated in the tubular guide 5, thereby, through the intermediacy of the member 9, moving the lower end of the member 1 laterally, that is to the right and left, as viewed in Fig. 1. The member 1 will thus impart a life like galloping movement to the horse 4. By reversing the position of the member 5 from that shown in Fig. 1 to that shown in Fig. 7, the movement of the horse 4 may be changed in character.

By having the brace members 26 diverging from each other, the guiding means is braced sidewise as well as endwise.

My construction affords a cheap and efficient mechanism which is free from liability of injuring patrons when they are getting on or off the horse.

I do not limit my invention to the structure shown and described, as modifications, within the scope of the appended claims, may be made without departing from the spirit of my invention.

What I claim is:—

1. In a seat-actuating mechanism for carousels, the combination of a seat carrier, means for reciprocating said carrier vertically, an inclined guide tube, and a head connected with said seat-carrier and slidable in said guide tube.

2. The combination with the platform and the sweep frame of a carousel, of a crank shaft mounted on the sweep frame, an inclined guide tube supported on the platform below said shaft and having a longitudinal slot in its upper side, a suspension rod carrying a seat-figure and having its upper end connected with said crank shaft, the lower portion of said rod passing through

said slot and having a head which slides in said tube.

3. The combination with the platform and the sweep frame of a carousel, of a crank shaft mounted on the sweep frame, an inclined guide tube supported on the platform below said shaft and having a longitudinal slot in its upper side, a suspension rod carrying a seat-figure and comprising separable upper and lower sections, the upper section being connected to the crank shaft and the lower section passing through said slot and carrying a head which slides in said tube, and means for interlocking said rod-sections.

4. In a seat actuating mechanism for carousels, the combination of a seat-carrier, means for reciprocating said carrier vertically, an inclined guide, and means connecting the carrier with said guide to move the same forward and backward.

5. In a seat actuating mechanism for carousels, the combination of a seat-carrier, means connected with one end of the carrier to reciprocate the same vertically, an inclined guide, and means connecting the opposite end of said carrier with said guide to move the same forward and backward.

6. In a seat actuating mechanism for carousels, the combination of a horizontal crank shaft, an upright seat-carrier having its upper end connected with the crank of said shaft, a stationary inclined guide arranged below said crank shaft, and a slide mounted on said guide and connected with the lower end of the seat-carrier.

7. In a seat actuating mechanism for carousels, the combination with the platform and the sweep frame above the same, of a crank shaft mounted on the sweep, a stationary inclined guide mounted on the platform below said crank shaft, and a suspension-rod carrying a seat and having its upper end connected with said crank-shaft and its lower end slidably connected with said guide.

8. In a seat actuating mechanism for carousels, the combination of the platform, a reversible frame pivoted at one end to said platform, a support for the other end of said frame detachably connected to the platform, an inclined guide mounted on said frame, a seat-carrier slidably connected with said guide, and means for vertically reciprocating said seat-carrier.

9. In a seat actuating mechanism for carousels, the combination of the platform, a reversible frame pivoted at one end to said platform, a support for the other end of said frame detachably connected to the platform, the platform having an opening adjacent to the pivoted end of said frame, an inclined guide-rod having its upper end attached to said frame and its lower end loosely arranged in said platform-opening, a seat carrier slidably connected with said guide-rod, and means for vertically reciprocating said seat-carrier.

10. In a seat actuating mechanism for carousels, the combination of the platform, a reversible frame pivoted at one end to said platform and having its other end detachably connected therewith, an inclined guide-rod mounted on said frame and reversible therewith, a suspension rod carrying a seat and comprising separable upper and lower sections, the lower section being slidably connected with said guide-rod, and means for vertically reciprocating said suspension-rod.

11. In a seat actuating mechanism for carousels, the combination of the platform, a reversible frame pivoted at one end to said platform and having its other end detachably connected therewith, an inclined guide-rod mounted on said frame and reversible therewith, a slide traveling on said rod, a seat-carrying rod comprising separable upper and lower sections, the lower section being connected to said slide, means for interlocking said sections, and means for vertically reciprocating said seat-carrying rod.

12. In a seat actuating mechanism for carousels, the combination of the platform, a reversible frame pivoted at one end to the platform, a brace pivoted to the other end of said frame, means for detachably securing the lower end of said brace to the platform, an inclined guide-rod mounted on said frame and reversible therewith, a slide traveling on said guide rod, a suspension-rod carrying a seat and having a separable lower section connected to said slide, and means for vertically reciprocating said suspension-rod.

13. In a seat actuating mechanism for carousels, the combination of the platform, a reversible frame pivoted at one end to the platform, a brace pivoted to the other end of said frame and provided at its lower end with a lip, a socket mounted on the platform and arranged to receive said lip, a latch for locking the lipped end of the brace in said socket, an inclined guide-rod mounted in said frame and reversible therewith, a seat-carrying rod having its lower end slidably connected with said guide-rod, and means for vertically reciprocating said suspension-rod.

14. In a seat actuating mechanism for carousels, the combination of the platform, a frame mounted thereon and including a pair of side bars, an inclined guide-rod mounted on said frame between said side-bars, whereby the latter form garment-guards, a seat-carrier mounted to slide on said guide-rod, and means for vertically reciprocating said seat-carrier.

15. In a carousel, an upwardly and downwardly reciprocative member, a support for

a person carried by said member, a stationary guide, and means operable by the upward and downward movement of said member and having a traveling connection with said guide, by which forward and backward oscillation is imparted to said member.

16. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined guide, and means having a traveling connection with said guide and by which lateral movement is imparted to said member.

17. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, a stationary guide, and means slidably connected with said guide by which forward and backward movement is imparted to said member.

18. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined tubular guide, a member slidable in said guide, and means pivotally connecting said slidable member with said reciprocative member.

19. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined tubular guide having a longitudinal slot, and guiding means connected to said reciprocative member and extending through said slot and slidable in said tubular guide.

20. In a carousel, an upwardly and downwardly reciprocative member, an inclined guide, a support for a person carried by said member, and guiding means connected with said member and having traveling connection with said inclined guide.

21. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined guide, and guiding means having traveling connection with said guide and having means for being detachably secured to said member.

22. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined stationary guide, and two members pivoted together, one of said two members being attached to said reciprocative member, and the other of said two members having traveling connection with said guide.

23. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined guide, and guiding means having traveling connection with said guide and having means for being detachably pivotally connected to said member.

24. In a carousel, an upwardly and downwardly reciprocative tubular member, a support for a person carried by said member, an inclined guide, and guiding means having traveling connection with said guide and insertible in said tubular member and provided with means for being releasably secured thereto.

25. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined guide, and two members pivoted together, one slidable on said guide, and the other secured to said reciprocative member.

26. In a carousel, an upwardly and downwardly reciprocative tubular member, a support for a person carried by said member, an inclined guide, and two members pivoted together, one having traveling connection with said guide, and the other insertible in said tubular member and having means for releasable attachment thereto.

27. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, a guide, and guiding means engaging said member and having traveling engagement with said guide and pivotal connection with said member.

28. In a carousel, an upwardly and downwardly reciprocative member, a tubular guide, and two guiding members pivoted together, one slidable in said tubular guide, and the other attached to said reciprocative member.

29. In a carousel, an upwardly and downwardly reciprocative member, a support for a person carried by said member, an inclined tubular guide having a longitudinal slot, and two guiding members pivoted together, one slidable in said guide and the other slidable in said slot and attached to said reciprocative member.

30. In a carousel, a guide for a seat support comprising an inclined guide member, guiding means having traveling connection with said guide member and having means for attachment to a seat support, and bracing means for supporting said guide member in the inclined position.

31. In a carousel, a guide for a seat support comprising an inclined guide member, guiding means having traveling connection with said guide member and having means for attachment to a seat support, a brace member attached to said guide member, and means by which said guide and brace members may be releasably secured to a suitable support.

32. In a carousel, a guide for a seat support comprising an inclined guide member, guiding means having traveling connection with said member and having means adapted for attachment to a seat support, two brace members secured to and diverging from said guide member, and means by which said guide and brace members are adapted for releasable attachment to a suitable support.

33. In a carousel, a guide for a seat support comprising an inclined guide member, two supporting plates, one of which has means for releasable attachment to said guide member, and a brace member secured to said guide member and having means for releasable attachment to the other supporting plate.

34. In a carousel, a guide for a seat support comprising an inclined guide member, two brace members secured thereto and diverging therefrom, and supporting means having means for releasable attachment to said guide and brace members.

35. In a carousel, a guide for a seat support comprising an inclined guide member, two resilient brace members secured thereto and diverging therefrom and provided each with a lateral arm, a supporting plate having a slot through which said arms are adapted to be inserted so as to engage the under side of the plate, and releasable means for holding said arms from disengagement from said plate.

36. In a carousel, a guide for a seat support comprising an inclined guide member, two brace members secured thereto and diverging therefrom and having their free ends movable toward and from each other, a supporting plate having a slot through which said brace members are adapted to be inserted, the brace members having means for being engaged and held by said plate when said brace members are spread apart to a pre-determined position, and releasable means for holding said brace members in said pre-determined position.

37. In a carousel, a guide for a seat support comprising an inclined guide member having two laterally extending arms, two supporting plates each provided with a slot, said arms being insertible through one of said slots and adapted to engage the plate having the last named slot when the arms are turned out of alinement with the slot through which they have been inserted, two brace members secured to said guide member and diverging therefrom, the free ends of said brace members being movable toward and from each other and insertible through the slot in the other supporting plate and having means, when spread apart to a pre-determined position for engagement with the last named plate, and means for releasably holding said brace members in said position.

In testimony whereof I have signed my name to this specification.

CHARLES E. MORRIS.