June 12, 1951 J. S. PATTEN 2,556,552

OCCUPANT PROPELLED MERRY-GO-ROUND

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Fig. 1.

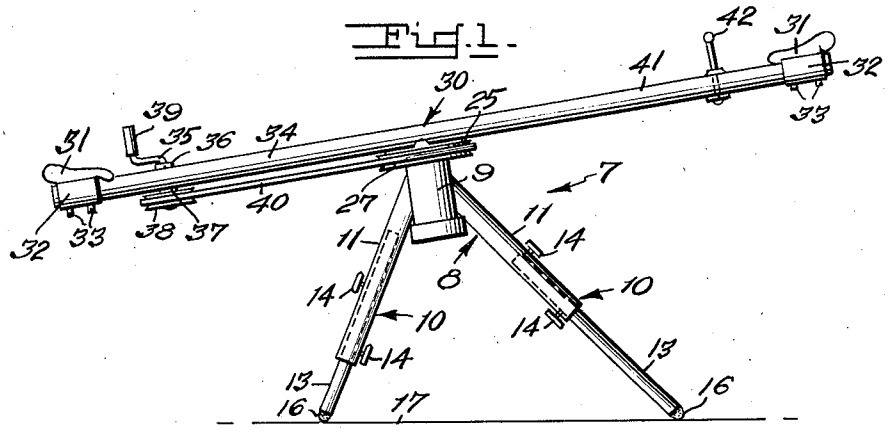


Fig. 2.

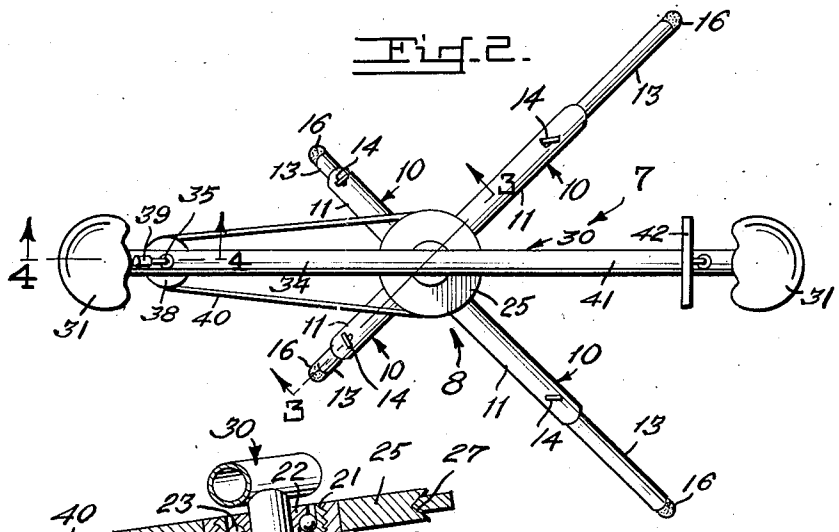


Fig. 3.

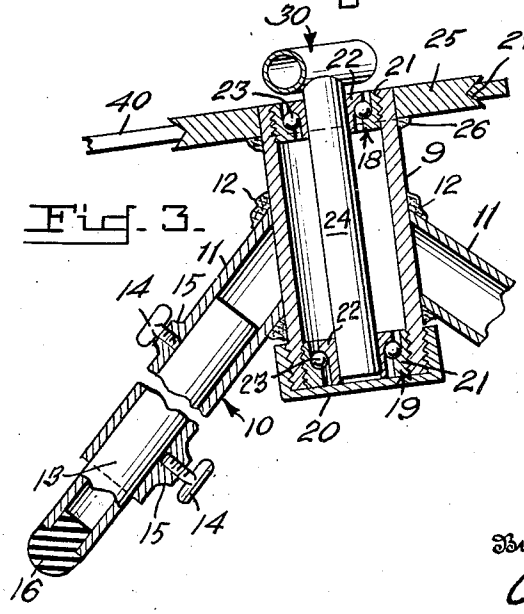
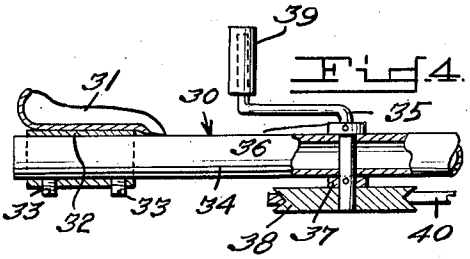


Fig. 4.



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Fig. 5.

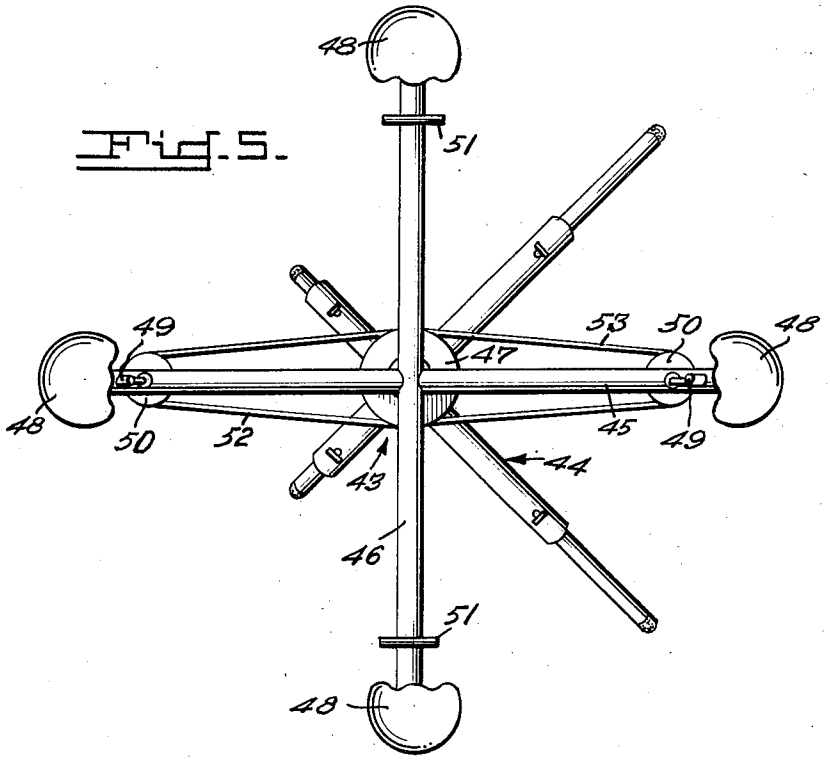
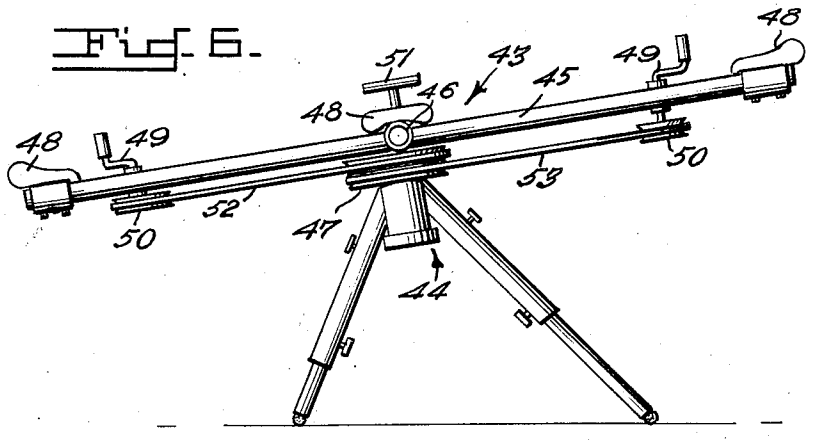


Fig. 6.



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OCCUPANT PROPELLED MERRY-GO-ROUND

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1 Claim. (Cl. 272—33)

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This invention relates to a merry-go-round of extremely simple construction for use by either two or four occupants which is actuated by one or more of said occupants to cause the merry-go-round to revolve relatively to its supporting structure to thereby afford amusement, especially for children.

Another object of the invention is to provide a merry-go-round of extremely simple construction and provided with an extremely simple means whereby one or more of the riders can manually actuate the merry-go-round to cause rotation thereof.

Still a further object of the invention is to provide a merry-go-round having an adjustable supporting structure capable of being readily adjusted for tilting the supporting structure with respect to a supporting surface so that the rotating, superstructure of the merry-go-round will describe an undulating path when revolved.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a side elevational view of one embodiment of the merry-go-round;

Figure 2 is a top plan view thereof;

Figure 3 is a vertical sectional view taken substantially along a plane as indicated by the line 3—3 of Figure 2;

Figure 4 is a sectional view taken substantially along a plane as indicated by the line 4—4 of Figure 2;

Figure 5 is a top plan view of a slightly modified form of the invention, and

Figure 6 is a side elevational view of the form of Figure 5.

Referring more specifically to the drawings, and first with reference to Figures 1 to 4, the novel merry-go-round as disclosed therein and which is designated generally 7 includes a supporting structure, designated generally 8 having a central sleeve or tubular housing 9 to which is secured corresponding ends of four supporting legs, each designated generally 10. Each of the supporting legs 10 includes an upper tubular section 11 which is welded or otherwise secured, as seen at 12 to the tubular housing 9 and so as to project outwardly and downwardly therefrom. Each of the legs 10 also includes a lower section 13 which may likewise be tubular and which telescopes into its section 12 and which is retained in any one of a plurality of adjusted positions with respect thereto by means of two

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setscrews 14 which engage threaded bosses 15 of its leg section 11. Each leg section 13 is preferably provided at its lower end with a rubber pad or foot member 16 which is adapted to engage the supporting surface 17, as seen in Figure 1, and which will prevent the legs 10 from slipping relatively thereto.

The tubular housing 9 is provided with internally threaded ends, the upper internally threaded end of which is adapted to receive a thrust bearing 18 and the lower internally threaded end of which is adapted to receive a thrust bearing 19. The lower end of the housing 9 is also externally threaded to detachably receive a cap 20. Each thrust bearing 18 and 19 includes an outer bearing element 21 which threadedly engages an internally threaded end of the housing 9 and an inner bearing element 22 that is supported for free rotation with respect to its bearing element 21 by a plurality of ball bearings 23 which are interposed therebetween. A shaft 24 is journaled in thrust bearings 18 and 19 and extends upwardly therefrom. An annular disk 25 is welded or otherwise secured as seen at 26 around the upper end of the housing 9 and has a V-shaped groove 27 extending around its periphery to form a fixed pulley-like element.

The upper end of the shaft 24 is fixedly secured to the intermediate portion of an elongated tubular bar, designated generally 30, corresponding ends of which form supporting arms each of which is adapted to support a seat 31 at the outer end thereof. As best seen in Figure 4, the seats 31 are provided on their under sides each with a tubular base 32 for slidably engaging an end of the bar 30 and each tubular base 32 is provided with one or a plurality of setscrews 33 by means of which the seat can be adjustably clamped to the supporting bar 30 at any desired distance from an end thereof.

One arm or end portion 34 of the supporting bar 30 has the shaft portion of a crank 35 extending perpendicularly therethrough and journaled therein. The crank 35 is retained against reciprocating motion with respect to the arm 34 by adjustable retaining collars 36 and 37 which are disposed above and below the arm 34, respectively. The lower retaining collar 37 constitutes an integral hub portion of a belt pulley 38 which is thereby fixed to an end of the shaft of the crank 35, below the arm 34. The opposite, offset upwardly extending end of the crank 35 is provided with a handle 39 which is rotatably attached thereon. As clearly illustrated in Figure 2, the crank 35 is disposed in sufficiently close prox-

imity to the seat 31 of the arm 34 so that the occupant of said seat can readily grasp the handle 39 for revolving the crank 35. An endless belt 40 is trained over the pulley 38 and member 25.

The other arm 41 of the bar 30 is provided with a conventional handle 42 disposed inwardly of and adjacent the other seat 31 and adapted to be grasped by the occupant of last mentioned seat.

From the foregoing it will be readily apparent that one, two or more of the legs 10 may be extended to a greater extent than other of the legs for positioning the support 8 at an incline to the supporting surface 17, as illustrated in Figure 1. Assuming that each of the seats 31 is occupied by a rider facing inwardly of the bar 30, the rider disposed adjacent the crank 35 will engage the handle 39 to revolve said crank and the pulley 38. Due to the frictional engagement of the belt 40 with the member 25, this will cause a pull to be exerted on the belt from the member 25 at a point on its periphery at a right angle to the bar 30. For example, if crank 35 is turned clockwise (Figure 2) the pull will be from below the bar 30 so that bar 30 will be revolved counterclockwise. This will cause the merry-go-round bar 30 to revolve on the support 8 and as the support is set at an incline, each end of the bar 30 will describe an undulating or up and down movement as it revolves. It will thus be readily apparent that a manually propelled toy merry-go-round of extremely simple construction has been provided which may be readily operated by one of the occupants thereof.

Figures 5 and 6 illustrate a slightly modified form of the merry-go-round, designated generally 43. The merry-go-round 43 has a supporting structure 44 corresponding to the supporting structure 8. In lieu of the single supporting bar 30, the merry-go-round 43 is provided with two supporting bars 45 and 46 which are secured together in crossed relationship to the upper end of a central shaft, not shown, corresponding to the shaft 24. In lieu of the single element 25, the merry-go-round 43 is provided with a similar element 47 having two belt grooves and which is mounted in the same manner as the element 25 and for the same purpose. A seat 48, corresponding to the seats 31 is secured to each end of each of the supporting bars 45 and 46 and each end of the supporting bar 45 is provided with a crank 49 and a pulley 50, corresponding to the crank 35 and pulley 38 and similarly located with respect to the seats 48 of said cross arm 45. The supporting bar or cross arm 46 adjacent each end thereof is provided with a handle 51, corresponding to the handle 42. A belt 52 is trained over the upper groove of the element 47 and over one of the pulleys 50 and an endless belt 53 is trained over the other pulley 50 and the lower groove of the element 47.

Accordingly it will be readily apparent that the merry-go-round 43 is manually operated by two of the four riders thereof who are supported by the seats 48 of the supporting bar 45 and who manually operate the cranks 49 while the other two riders engage the handles 51 and ride the seats 48 of the supporting bar 46. The supporting structure 44 is also adapted to be disposed at an incline as seen in Figure 6 so that the ends of the bars 45 and 46 will move upwardly and downwardly as they are revolved.

Various other modifications and changes are likewise contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claim.

I claim as my invention.

An occupant propelled merry-go-round comprising a supporting structure including a central bearing, four supporting legs secured to and depending from said bearing in diverging relationship to one another, said legs being equally spaced around the bearing, a shaft journaled in said bearing and rising therefrom, a supporting bar secured intermediate of its ends to the upper end of said shaft and supported thereby above said supporting structure, a seat secured to each end of the supporting bar, a crank journaled in said supporting bar adjacent one of said seats, a pulley fixed to said crank, a pulley-like element fixed to the central bearing and disposed around the shaft, and an endless belt trained over said pulley and pulley-like element for causing the shaft and supporting bar to be revolved relatively to the supporting structure when the crank is rotated, said legs each being formed of extensible sections whereby two adjacently disposed legs may be extended to a greater distance than the two remaining legs for positioning said supporting structure with the axis of the central bearing inclined at various angles to the vertical so that the ends of the supporting bar will describe an undulating course when revolved.

JAMES STEWART PATTEN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
617,609	Spracklen	Jan. 10, 1899
639,386	Hile	Dec. 19, 1899
1,491,938	Wennerstrom	Apr. 29, 1924
1,791,227	Russell	Feb. 3, 1931
2,503,997	Miller	Apr. 11, 1950.