June 23, 1925. 1,543,020

H. B. LOMBARD

MERRY-GO-ROUND

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Fig. 1.

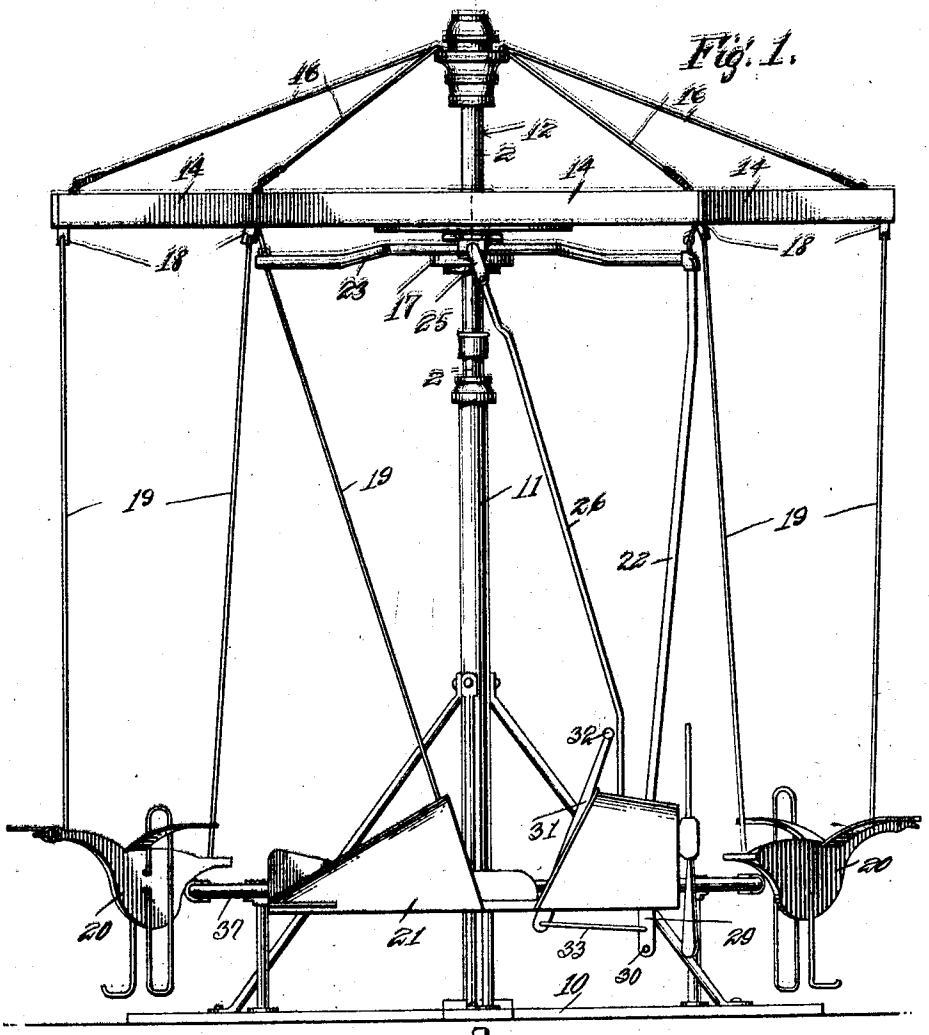

Fig. 4.

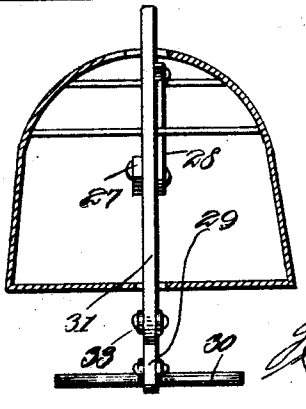

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Fig. 2.

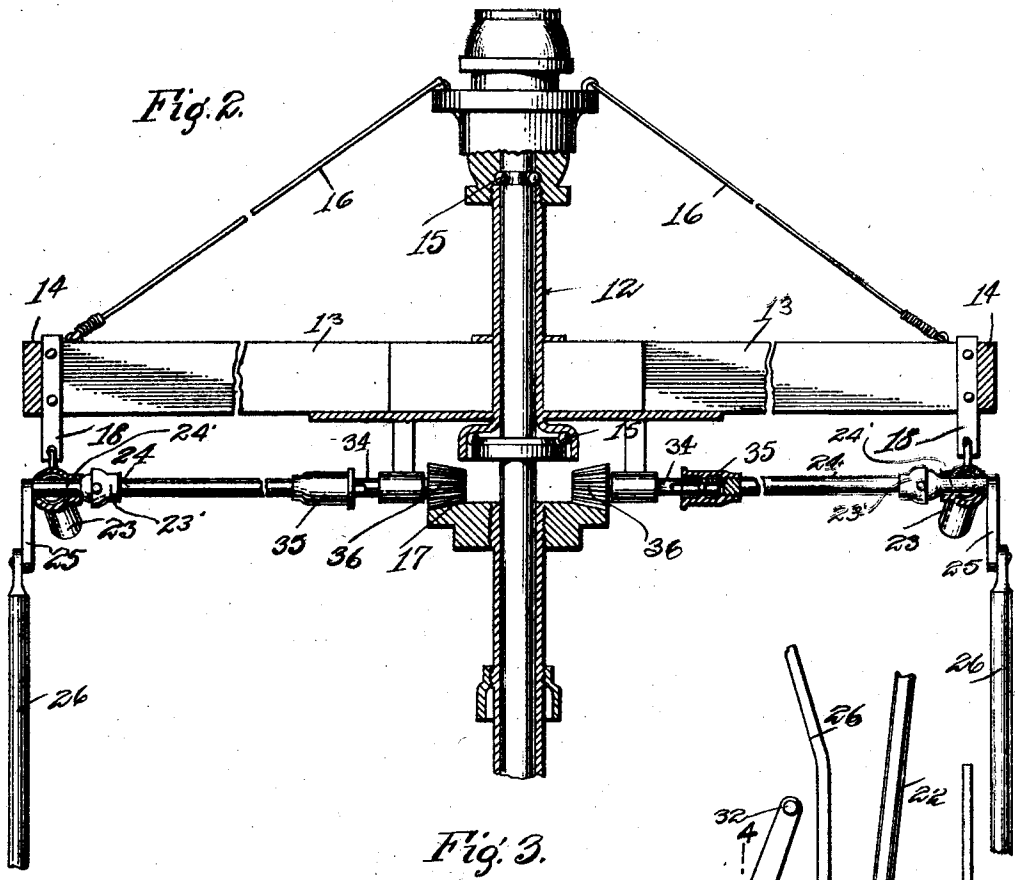
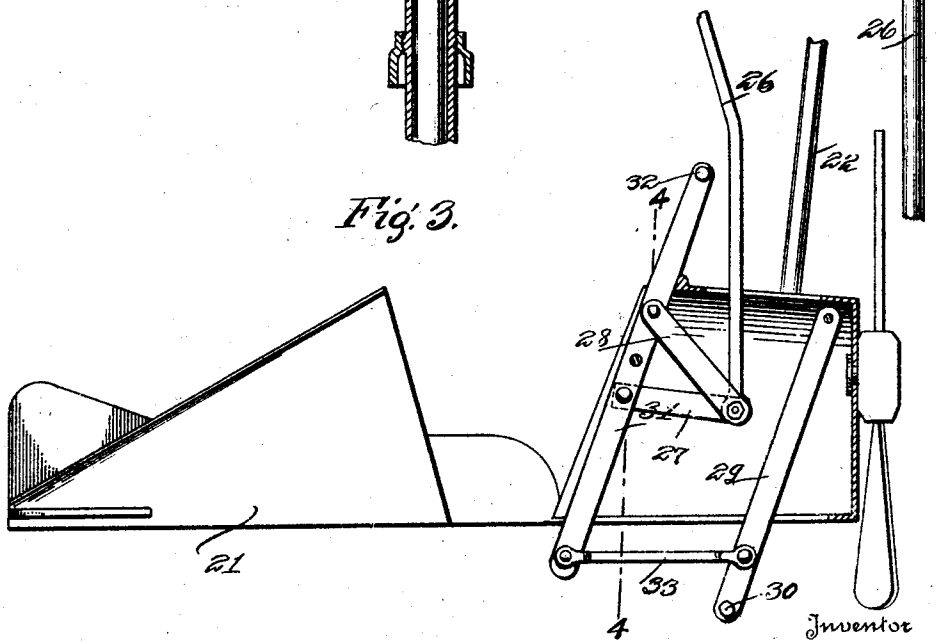


Fig. 3.



Inventor

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Attorney

Patented June 23, 1925. 1,543,020

UNITED STATES PATENT OFFICE.

HUEL B. LOMBARD, OF BROOKINGS, SOUTH DAKOTA.

MERRY-GO-ROUND.

Application filed January 11, 1923. Serial No. 612,052.

To all whom it may concern:

Be it known that I, HUEL B. LOMBARD, a citizen of the United States, residing at Brookings, in the county of Brookings, State of South Dakota, have invented certain new and useful Improvements in Merry-Go-Rounds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in amusement devices and particularly to merry-go-rounds.

One object of the invention is to provide a merry-go-round which is arranged to be driven by certain of the car occupants, the cars of the device being arranged to swing outwardly, as the device rotates.

Another object is to provide a novel and improved driving mechanism whereby as the cars swing outwardly, the driving connections are not interfered with.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a side elevation of a merry-go-round made in accordance with the invention.

Figure 2 is an enlarged vertical sectional view on the line 2—2 of Figure 1.

Figure 3 is a partial sectional view through one of the driving cars.

Figure 4 is a vertical transverse sectional view through the forward end of one of the driving cars, on the line 4—4 of Figure 3.

Referring particularly to the accompanying drawings, 10 represents a suitable base on the center of which is erected a center pole or post 11, and rotatably engaged on the upper end of this post is an elongated cap 12. Secured to and radiating from this cap are the arms 13, to the outer ends of which, and extending therebetween are the spacing strips 14. Anti-friction bearings 15 are disposed between the cap and post, as clearly seen in the vertical sectional view Figure 2. Connected to the upper end of the cap 12, and to the outer ends of the arms 13, are the supporting and bracing cables or rods 16. Rigidly mounted on the post, below the arms 13, is a ring gear 17. Depending from the outer end of each of the arms 13 are the brackets 18, and suspended from certain of these brackets, by means of the cables or rods 19, are the cars 20. Certain of the cars, designated by the numeral 21, are known as the motor cars, or driving cars, each of these cars suspended at its forward end by a heavier rod 22. Connected to the upper end of this heavier rod 22 is a horizontally disposed rod 23, the same having its other end connected to the upper end of the cable 19, and to the bracket 18. On the intermediate portion of the rod 23, which portion is offset outwardly and upwardly, there is mounted a transverse shaft 24, connected to a short shaft 24′ by means of a ball-and-socket joint 23′. The outer end of the shaft 24′ carries a crank 25 to which is connected the upper end of the operating link or pitman 26, said pitman extending downwardly through the forward end of the car. Pivotally mounted in the car and depending through the bottom thereof, is a lever 29, the lower end of which is provided with a cross member 30, on which the feet of the occupant are placed. A vertical lever 31 is centrally pivoted in the car and extends above and below the car, the upper end being provided with cross handles 32, while the lower end is pivotally connected with the lower end of the lever 29, just above the foot bar 30, by means of a link 33. Rigidly mounted on the lever 31, and extending forwardly therefrom, is a triangular member composed of the arms 27 and 28, and to the forward or apex end thereof is pivoted the lower end of the pitman 26, as clearly seen in Fig. 3. By means of the levers, moved by the hands and feet of occupant, the link or pitman 26 is reciprocated to cause the rotation of the shaft 24. To the inner end portion of the shaft 24 there is connected the outer end of a radial shaft 34, the same being connected to said shaft by means of a sliding joint 35. The shaft 34 has on its inner end a pinion 36 which meshes with the ring gear 17. Thus, as the car swings outwardly the rod 22 will be rocked, carrying the shaft 24 out of horizontal position, but by reason of the sliding joint 35 and the universal joint 23′, operative driving connections with the shaft 34 are not interfered with. Driv-

ing may thereby be accomplished at any point between the vertical position of the car to a horizontal position extending outwardly from the outer ends of the radial arms of the supporting structure.

Supported on the base, and elevated thereabove into a plane approximately in line with that of the cars, is a circular rail 37, which may be grasped by the occupants of the cars to give a start to the device, or to bring the device to a stand-still.

What is claimed is:

1. A merry-go-round including a center post, a rotary carriage on the post, a series of cars suspended on the carriage, a series of outwardly swinging frames suspended on the carriage and extending in tangential relation thereto, cars suspended on the swinging frames, manually operable driving means on each of the last-named cars including a rocker, a crank shaft on each of the swinging frames, a gear on the post, a radial shaft having a driving gear engaged with the post-carried gear, a rod connecting the said crank and rocker, and a universal joint and sliding joint connections between the second frame crank shaft and the radial shaft.

2. A merry-go-round including a center post, a rotatable frame supported on the post, a gear on the post, cars, flexible means supporting the cars on the frame, shafts supported for rocking movement on the frame and having intermediate crank portions, radial shafts each having an inner section provided with a gear engaged with the post gear, an outer section rotatable in the crank portion of a rocking shaft, and an intermediate section slidably connected with the inner section, and universally joined with the outer section, depending bars on the rocking shafts, cars carried by said bars, and driving means in the last-named cars operatively connected with the said outer sections of the radial shafts.

In testimony whereof, I affix my signature, in the presence of two witnesses.

HUEL B. LOMBARD.

Witnesses:
F. P. HERMAN,
J. A. LUNDEN.