

Sept. 7, 1926.

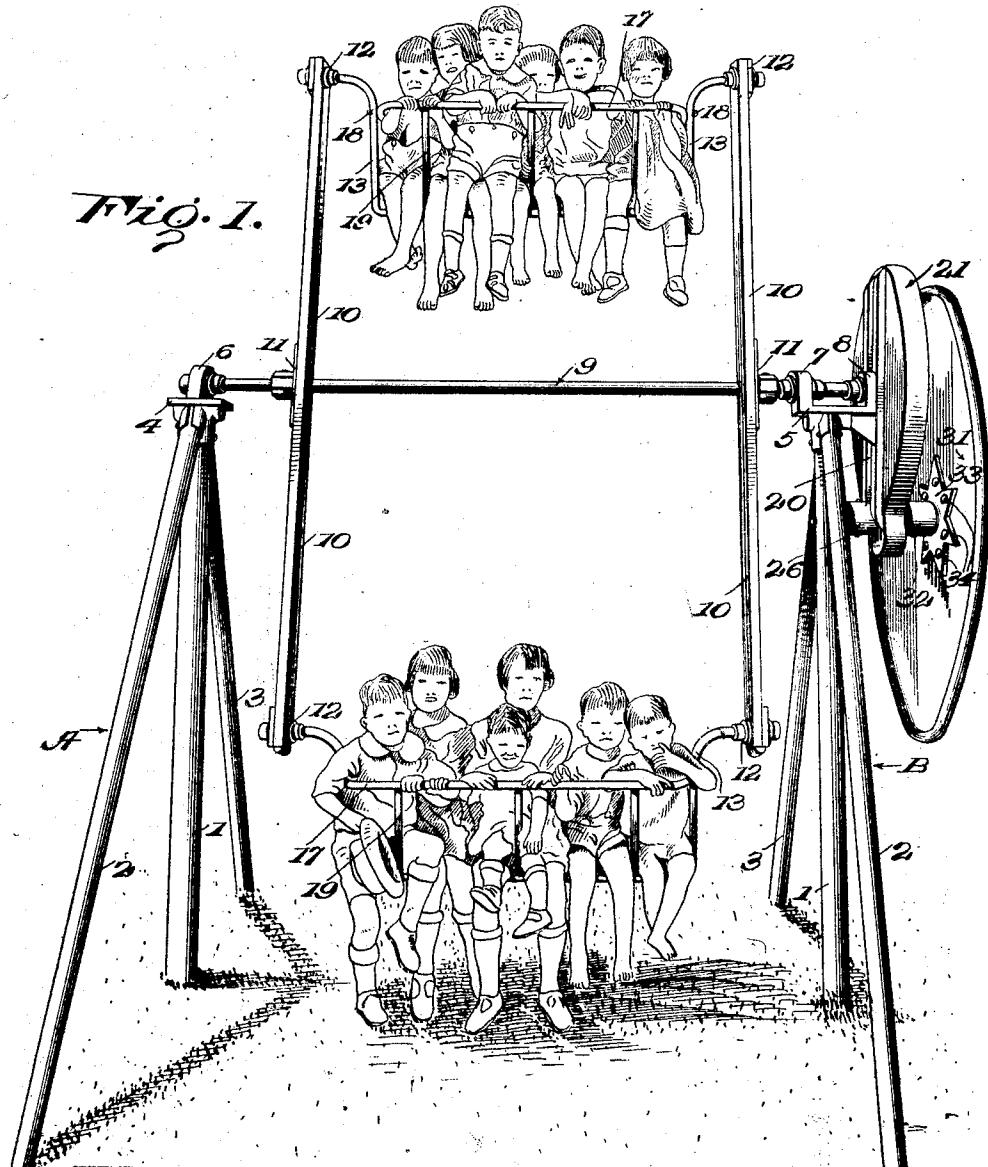
1,599,014

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AMUSEMENT DEVICE

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2 Sheets-Sheet 1



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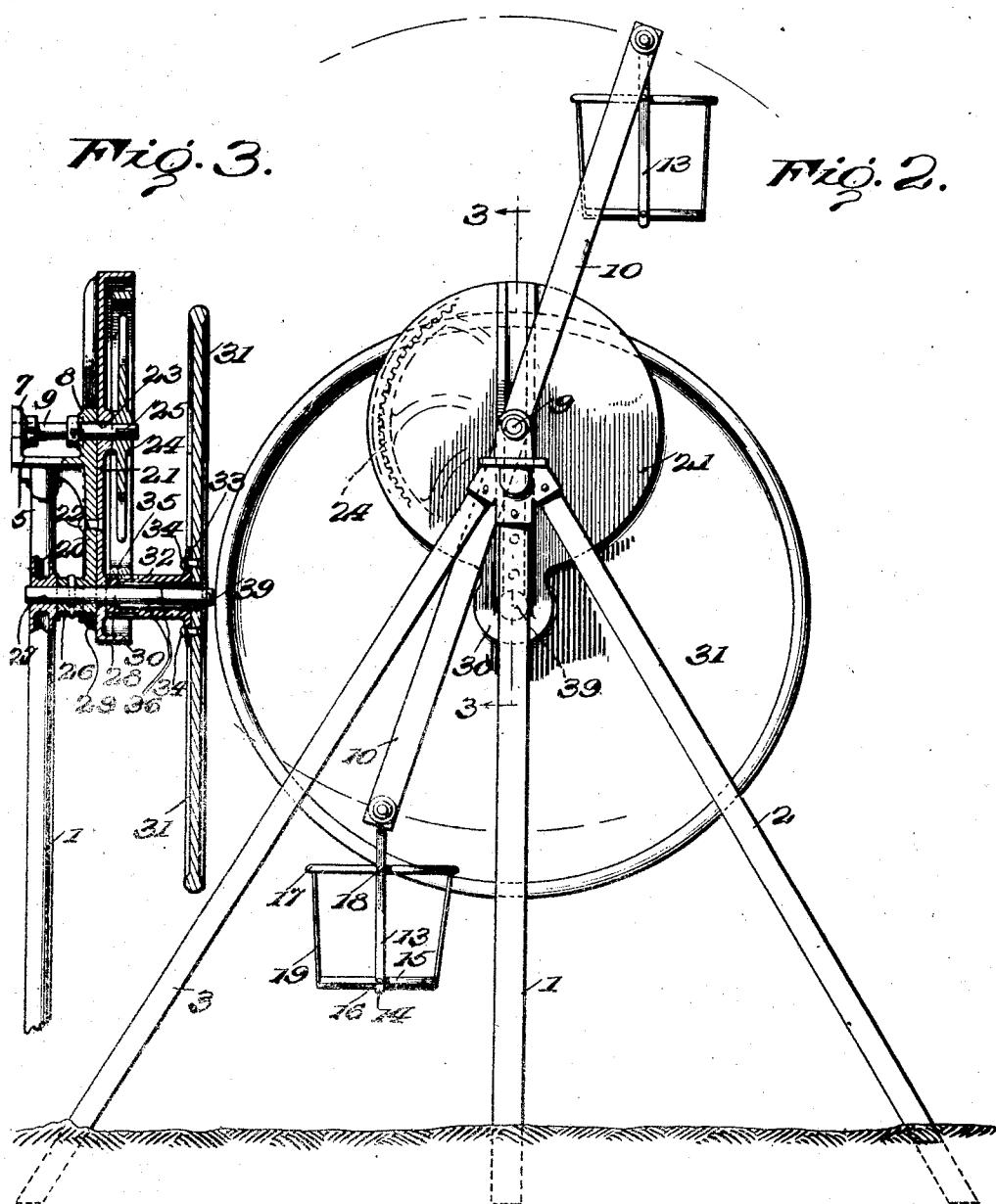
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2 Sheets-Sheet 2



WITNESSES

WITNESSES

INVENTOR

INVENTOR
O.B. HUNTER,
BY *Henry J. He*

ATTORNEYS

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1,599,014

UNITED STATES PATENT OFFICE.

OMER BENJAMIN HUNTER, OF CHICKASHA, OKLAHOMA.

AMUSEMENT DEVICE.

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My invention relates to improvements in amusement devices, more particularly to an amusement device having a rotary carrier for passengers, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of the invention is to provide an amusement device of the character described having a carrier movable in a vertical plane and provided with seats for passengers, the carrier being supported so that the passengers can mount thereon from the ground and the carrier propelled either by the passengers thereof or can be operatively connected to any other suitable driving means.

A further object of the invention is to provide an amusement device of the character described in which the rotary movement of the passenger carrier is equalized and made uniform throughout each complete rotation of the carrier.

Other objects and advantages will be apparent from the following description, considered in conjunction with the accompanying drawings, in which—

Figure 1 is a front view of the improved amusement device in use,

Figure 2 is a side elevation of the device, and

Figure 3 is a section along the line 3—3 of Fig. 2.

The supporting structure of the device comprises a pair of side members indicated generally at A and B respectively and each comprising an upright or standard 1 and a pair of oppositely inclined straight members 2 and 3 respectively. The members 1, 2 and 3 of the supporting member A are connected at their upper ends by a cap plate 4. The members 1, 2 and 3 of the supporting member B likewise are connected at their upper ends by a cap plate 5. The cap plate 4 is provided with a pair of spaced bearings 7 and 8 respectively upstanding therefrom and in alignment with each other and with the bearing 6.

The device also includes a rotary carrying frame comprising a horizontal shaft 9 which is journaled adjacent to one of its ends in the bearing 6 and has the other end portion thereof journaled in and extend-

ing beyond the bearings 7 and 8. The carrying frame also includes oppositely extending pairs of spaced apart parallel arms 10 equal in length which extend radially from the shaft 9. As shown, these arms 10 are end portions of elongated members which 60 may be channel irons and which have transverse openings intermediate their ends through which the shaft 9 extends, said elongated members being secured to the shaft to rotate therewith in any suitable known manner, as by means of the fastening devices indicated at 11.

The outer end portions of the arms 10 of each pair are provided with aligned bearings 12 in which the outturned portions of arms 13 of a substantially U-shaped hanger member are journaled. The web portion of each hanger member, indicated at 14, is horizontal and is of relatively great length. This web portion of the hanger 75 member extends longitudinally of a seat board 15 underneath the latter and along the longitudinal median line thereof. The seat board 15 is firmly secured to the hanger member on which it is supported by suitable 80 fastening means indicated at 16. An endless guard rail 17 of substantially elliptical shape is supported above the seat board 15 and is secured at its ends to the upper end portions of the hanger arms 13 by fastening devices 18. Connecting bars 19 connect the guard rail 17 to the marginal edge portion of the seat board at spaced intervals along the guard rail and stay the guard rail and the seat board to each other.

The cap plate 5 is provided at its outer end with a depending integral extension 20 which depends alongside the member 1 of the support B. A gear housing 21 is rigidly secured to the depending extension 20 by 95 fastening devices such as that indicated at 22 so that a central opening in the body of the gear housing is in line with the bearing 8. The adjacent end portion of the shaft 9 extends from the bearing 8 through the 100 opening 23 into the gear housing. A gear wheel 24 is secured on this end portion of the shaft 9 within the gear housing, as at 25, to rotate with the shaft 9.

The depending extension 20 has a laterally extending tubular boss 26 at its lower end which extends against the member 1 of the support B, the bore of the tubular

boss 26 being in alignment with a transverse opening 27 through the member 1 of the support B. A short shaft 28 is partially received in the bore of the tubular boss 26 and the opening 27 and extends from the outer end of the tubular boss through a lateral opening 29 in a depending enlargement 30 at the lower end of the gear housing 21 laterally of the plane of the outer end of the gear housing. It may be said at this time that the gear housing is open at its outer end. A fly wheel 31 has a hub member 32 extending from an axial opening in the fly wheel laterally of one face of the fly wheel. This hub member 32 may be a tubular member having a flange 33 at one end secured by fastening devices 34 to the fly wheel. The hub member 32 is adapted to be slipped over the outer end of the shaft 28 until the outer extremity of the shaft 28 protrudes through the axial opening beyond the outer face of the latter, and a gear 35 which is integral with the hub member 32 at the free end of the latter is in mesh with the gear wheel 24. The hub member 32 preferably is supported anti-frictionally on the shaft 28 as by means of roller bearings 36 and is prevented from moving outward from the position illustrated in Figure 3 on the stub shaft 28 in any suitable known manner, as by means of a cotter pin 39 carried by the extreme outer end portion of the shaft 28.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. The fly wheel 31 is sufficiently heavy to equalize the movements of the rotary carrying frame and to prevent any appreciable acceleration in the rate of movement of the rotary frame when the weights carried by the respective seats which are supported by the carrying frame are unequal or only one of the seats is occupied. The ratio of the gear 24 to the gear 35 preferably is approximately 10 to 1 so that the rate of rotary movement of the carrying frame when the latter is actuated as a result of the turning of the wheel 31 by hand will be sufficiently slow to positively prevent accidents and at the same time will be sufficiently rapid to afford entertainment and amusement. As stated, a torque can be imparted to the shaft 9 by turning the fly wheel 31 but this need be done only to cause the positioning of one of the seats at the lowermost part of the frame so that the same can be filled with passengers from the ground. Rotary movement then can be imparted to the frame by the passengers who shove against the ground with their feet, the passengers of each seat contributing to the movement of the rotary carrying frame by kicking against the ground as that particular seat passes close to the ground and the fly wheel acting to stabilize and equalize

the movement of the rotary carrying frame. The carrying frame will rotate with but very little friction. It will be obvious that the rotary carrying frame can be driven by a torque imparted to the shaft from any suitable source of driving power, none being shown, since obviously a driving connection could be established between the shaft 9 and any suitable prime mover through the use of any one of various motion transmission means well known in the art.

Since the seat boards are secured on the web portions of substantially U-shaped hangers having the outer end portions of the arms thereof outturned and journalled in bearings in the arms of the rotary frame, it will be manifest that the seat boards will remain continuously below the axes of the outturned end portions of the arms of the supporting hangers during the rotary movement of the carrying frame.

Obviously, my invention is susceptible of embodiment in forms other than that illustrated in the accompanying drawing; and I therefore consider as my own all such modifications and adaptations of the form of the device as herein described as fairly fall within the scope of the appended claims:

I claim:—

1. An amusement device of the character described comprising a frame supported for rotation about a horizontal axis, a plurality of regularly spaced seats swingingly supported on the frame, a drive shaft supported to rotate about an axis parallel to the axis of rotation of said frame, speed reduction motion transmitting means connecting said drive shaft and said frame, and a heavy wheel secured to said drive shaft and constituting both a fly wheel and a handle operable to turn said drive shaft.

2. An amusement device of the character described comprising a frame supported for rotation about a horizontal axis, a plurality of regularly spaced seats swingingly supported on the frame, a drive shaft supported to rotate about an axis parallel to the axis of rotation of said frame, motion transmitting means connecting said drive shaft and said frame, and a heavy wheel secured to said drive shaft and constituting both a fly wheel and a handle operable to turn said drive shaft, said wheel having a central opening for the reception of the drive shaft and being otherwise imperforate.

3. A device of the character described comprising a carrying frame consisting of a shaft having radial arms extending therefrom for rotation therewith, seats swingingly supported at the outer ends of said arms, and means for rotatably supporting said shaft in horizontal position, a rotatable fly wheel; and motion transmission means connecting said shaft and said fly wheel and including a plurality of gears in

mesh with one another, said fly wheel having the peripheral edge portion thereof convexly curved in cross section and adapted to be grasped and manipulated to rotate 5 said frame.

4. A device of the character described comprising a pair of spaced apart upstanding supports having horizontally alined bearings at their upper ends, a shaft journalled in said bearings, a plurality of pairs of spaced apart radial arms extending from said shaft and secured to the latter to rotate therewith, the arms of each pair being provided with alined bearings adjacent to their outer ends, a substantially U-shaped hanger having the outer end portions of the arms thereof outturned and journalled in said last named bearings, a seat board secured on the web portion of each hanger, a relatively large gear secured on an end portion of said shaft, a fixed shaft parallel to said end portion of the first shaft, a fly wheel rotatably supported on said fixed shaft, and a relatively small gear rigid with said fly 25 wheel and in mesh with said larger gear said fly wheel having the peripheral edge portion thereof convexly curved in cross sec-

tion and adapted to be grasped and manipulated to rotate said frame.

5. A device of the character described 30 comprising a pair of spaced apart upstanding supports having horizontally alined bearings at their upper ends, a shaft journalled in said bearings, a plurality of pairs of spaced apart radial arms extending from 35 said shaft and secured to the latter to rotate therewith, the arms of each pair being provided with alined bearings adjacent to their outer ends, a substantially U-shaped hanger having the outer end portions of the arms 40 thereof outturned and journalled in said last named bearings, a seat board secured on the web portion of each hanger, a relatively large gear secured on an end portion of 45 said shaft, a fixed shaft parallel to said end portion of the first shaft, a fly wheel rotatably supported on said fixed shaft, a relatively small gear rigid with said fly wheel and in mesh with said larger gear, and a housing for said gear wheels, said fly wheel 50 having an imperforate web portion and a transversely rounded rim portion.

OMER BENJAMIN HUNTER.