

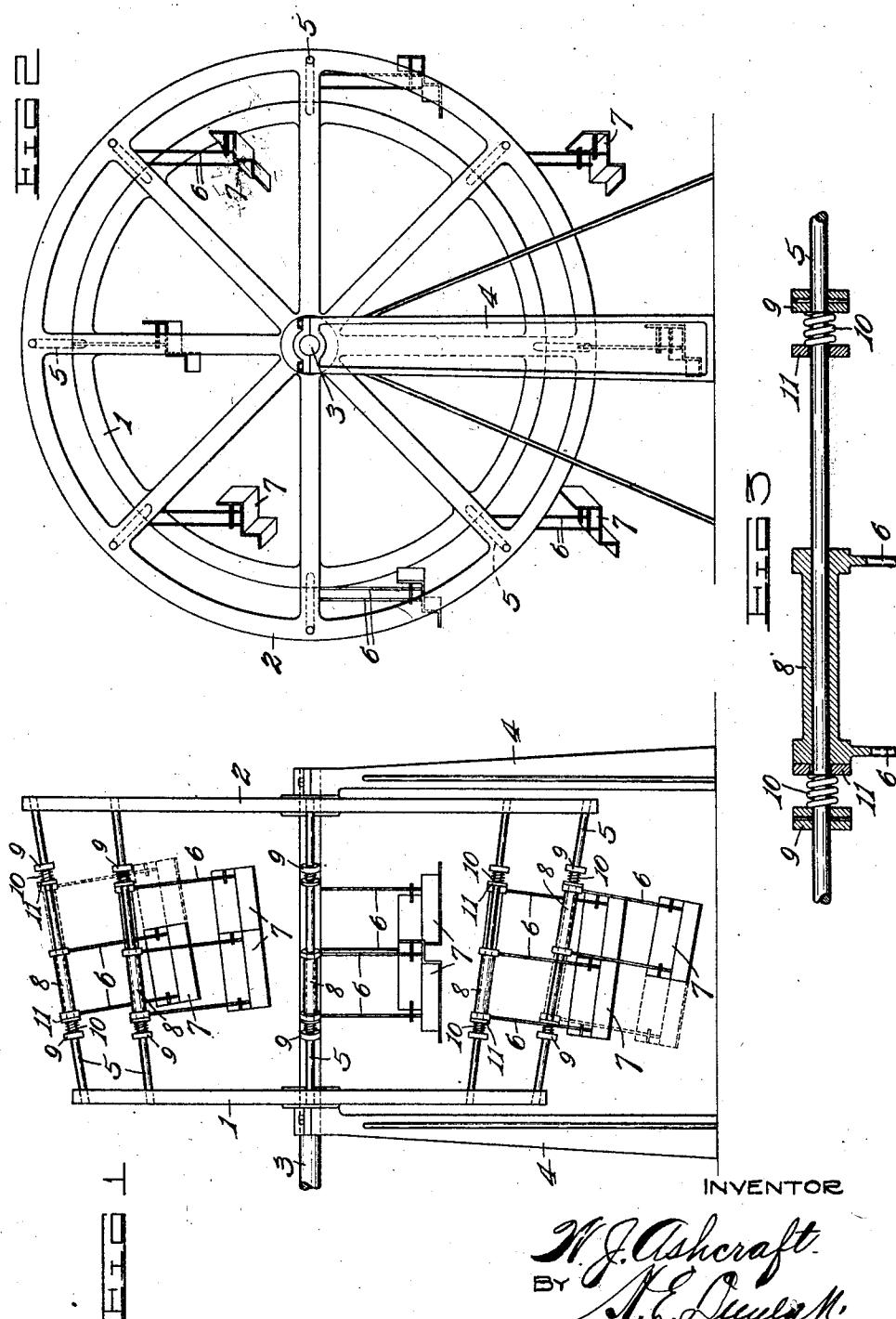
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AMUSEMENT APPARATUS

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## AMUSEMENT APPARATUS.

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This invention relates broadly to amusement apparatus, and it has for its primary object to provide a revoluble passenger-carrying vehicle of the so-called Ferris-wheel type in which the various passenger cars or carriages are automatically shiftable in lateral directions in, or during, each revolution of the vehicle, thereby to subject the occupants of such carriages to more or less violent sudden, and pleasurable disconcerting, though expected, equilibrium-disturbing movements.

In describing the invention in detail, reference is herein had to the accompanying drawings, in which—

Figure 1 is a front elevation of the invention;

Figure 2 is a side elevation of the same; and—

Figure 3 is a detail section illustrating a form of laterally shiftable carrier for a carriage and a shock reducing buffer.

Referring to said drawings, 1 and 2 indicate two oppositely facing parallel wheels 25 which are fixed upon a horizontal shaft 3 which has its ends journaled on supports, as the upright members 4 of a suitable stationary frame, or supporting structure.

Rigidly connecting and relatively bracing said wheels 1 and 2 is a plurality of rods or shafts 5 which, as herein shown, are in the nature of tie-rods. Said rods convergently incline from one wheel to the other, having connection with said wheels adjacent to the peripheries of the latter, one of said wheels, as 1, preferably being of less diameter than the other, as shown. The degree of inclination of the rods may vary considerably, as will be evident, and will be adjusted to properly meet the requirements as to the rapidity of the shifting movements of the carriages, hereinafter described, thereby to regulate the violence of the shocks to which the carriages and their occupants shall be subjected.

Each of the tie-rods 5 constitutes a support and trackway for the hanger-like supporting members 6 of a car or carriage 7 of any suitable form designed for seating passengers. The members or supports 6 of each carriage have rigid connection with a sleeve 8 which is more or less loosely mounted upon a tie-rod so as to permit unobstructed rotary movement of said tie-rod with respect thereto during the rotation of the wheels,

thus to allow the carriage at all times to occupy suspended relation to its supporting tie-rod. Additionally, each sleeve 8 is freely slideable lengthwise along its tie rod between certain limits which are fixed by the positioning of stop blocks 9 rigidly mounted on said tie-rod. As is obvious, the distance throughout which the sleeve is movable may be changed by altering the position of either one, or both, of said stop blocks. To reduce the violence of the shocks to which the sleeve 8 and, consequently, the carriage 7 suspended thereby are subjected at the opposite limits of movement, buffer springs 10 of spiral form are carried by the tie-rod, 70 such springs having their outer end seated against the inner, or confronting, faces of said stop blocks and having slideable collars 11 resting against their opposite ends, as shown.

In practice, when the structure is rotated on its axis in the manner usual to pleasure apparatus of Ferris-wheel type, the carriages 7 are maintained by the force of gravity in their vertically suspended positions, the sleeves 8 and their carrying tie-rods being relatively rotatable. As each carriage is elevated from its lowermost, or loading, position, it remains in stationary relation to its supporting tie-rod 80 until it reaches an elevation above the level of the horizontal plane of the axis of the wheels at which, due to the increasing inclination of such tie-rod with respect to the horizontal, the force of gravity acts to 90 overcome the frictional resistance to endwise movement which exists between the sleeve 8 and the tie-rod, whereupon the sleeve and suspended carriage, impelled by gravity, instantly shifts to the opposite limit of 95 movement—that is to say, from the dotted line position of said parts shown in the upper portion of Fig. 1 to the full line position shown in said portion. The position so assumed is then maintained by 100 such sleeve and carriage until, in descending from the topmost position to which they are carried in the rotation of the apparatus, they reach a position below the level of the horizontal plane of the axis of the apparatus at which, due to the increasing inclination of the supporting tie-rod (this time in a direction opposite that assumed in the elevating portion of the rotation), 105 gravity exerts a force which overcomes the 110

frictional resistance to endwise movement of the sleeve which exists between the latter and the tie-rod, whereupon said parts instantaneously return to their original positions at the opposite limit of their range of movement—that is to say, from the dotted line position to the full line position shown in the lower portion of Fig. 1.

What is claimed is—

- 10 1. An amusement apparatus of the character described, comprising a pair of oppositely facing wheels mounted for rotation on a common axis, a plurality of rods carried intermediate and in fixed relation to said wheels, said rods being inclined relative to said axis, suspension means slidably mounted on said rods, and carriages suspended from said suspension means.
- 15 2. An amusement apparatus of the character described; comprising a pair of oppositely facing wheels mounted for rotation on a common axis, a plurality of rods carried intermediate and in fixed relation to said wheels, said rods being inclined relative to said axis, suspension means slidably mounted on said rods, carriages suspended from said suspension means, and yieldable buffers mounted on said rods at opposite limits of movement of said suspension
- 20 3. An amusement apparatus of the character described, comprising a pair of oppositely facing wheels mounted for rotation on a common axis, supporting members arranged between and in fixed relation to said wheels, said members being inclined relative to said axis, a plurality of carriages, and suspension means for said carriages borne by said supporting members, said means be-

ing both rotatable and longitudinally slideable relative to the latter.

4. An amusement apparatus of the character described, comprising a pair of oppositely facing wheels mounted for rotation on a common axis, supporting members arranged between and in fixed relation to said wheels, said members being inclined relative to said axis, a sleeve carried by each of said members in rotatable and longitudinally shiftable relation thereto, and a carriage disposed in suspended relation to said sleeve.

5. An amusement apparatus of the character described, comprising a pair of oppositely facing wheels mounted for rotation on a common axis, a plurality of rods carried intermediate and in fixed relation to said wheels, said rods being inclined relative to said axis, sleeves carried by said rods, said sleeves being both rotatable and longitudinally shiftable on said rods, and carriages supported by said sleeves.

6. An amusement apparatus of the character described, comprising a pair of oppositely facing wheels mounted for rotation on a common axis, a plurality of rods carried intermediate and in fixed relation to said wheels, said rods being inclined relative to said axis, sleeves carried by said rods, said sleeves being both rotatable and longitudinally shiftable on said rods, carriages supported by said sleeves, and yieldable buffers disposed on said rods at the opposite limits of longitudinal movement of said sleeves.

In testimony whereof, I affix my signature.

WENDELL J. ASHCRAFT.