

No. 682,440.

Patented Sept. 10, 1901.

G. F. WEBER.

## PLEASURE WHEEL.

(Application filed June 6, 1900.)

(No Model.)

3 Sheets—Sheet 1.

**Witnesses:**

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## Inventor:

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Geo. W. Math

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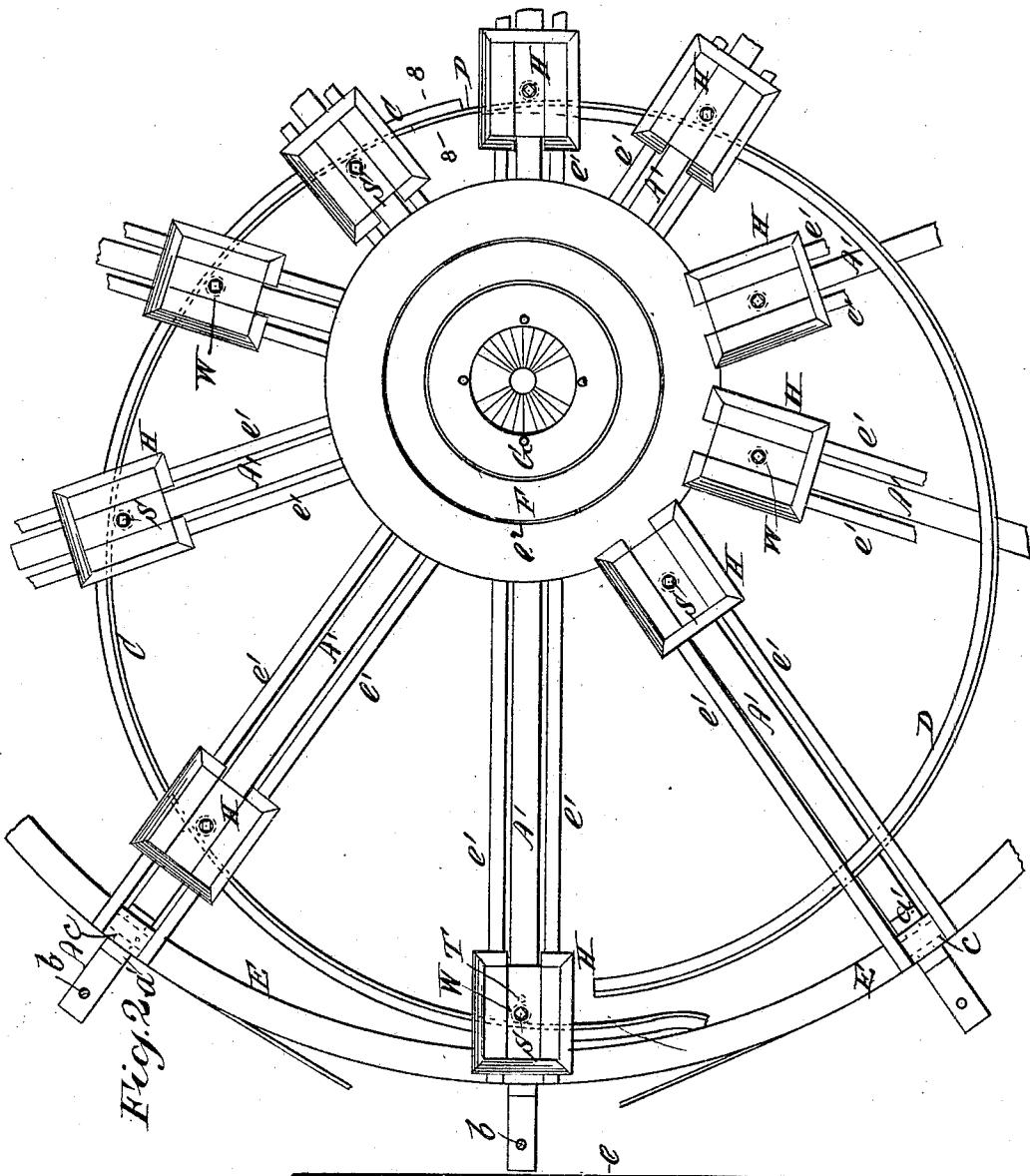
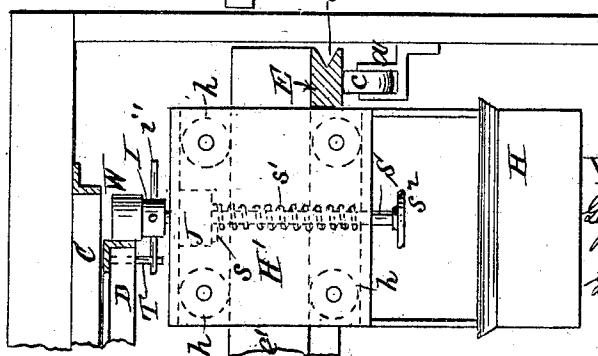


Fig. 2a

Fig. 3.



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Fig. 4.

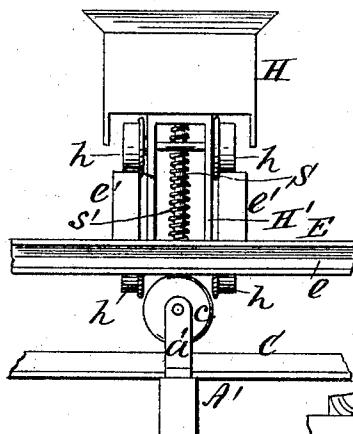


Fig. 6.

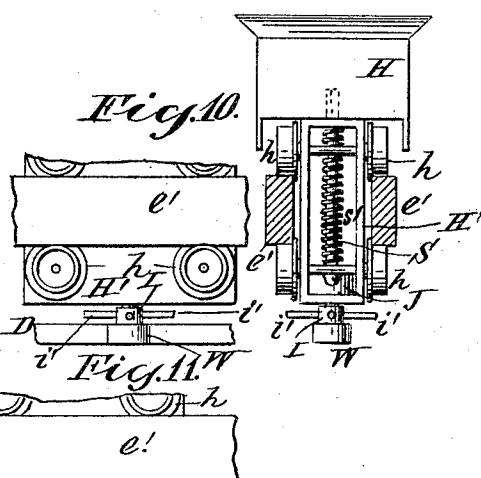


Fig. 5.

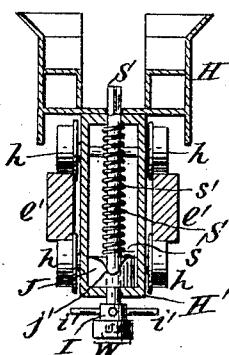


Fig. 8.

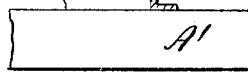
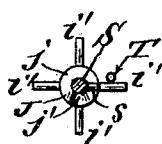
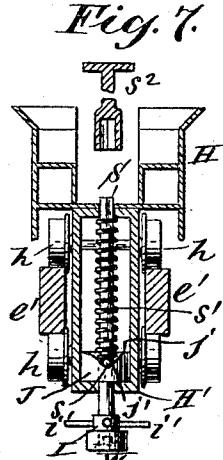


Fig. 9.



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# UNITED STATES PATENT OFFICE.

GEORGE FREDERIK WEBER, OF NEW YORK, N. Y.

## PLEASURE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 682,440, dated September 10, 1901.

Application filed June 6, 1900. Serial No. 19,217. (No model.)

To all whom it may concern:

Be it known that I, GEORGE FREDERIK WEBER, a citizen of the United States, residing in the city, county, and State of New York, 5 have invented certain new and useful Improvements in Pleasure-Wheels, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the 10 same.

My invention relates to the class of pleasure-wheels known as "carousels," "merry-go-rounds," &c., and is designed to admit of the continuous rotation of such a wheel by providing means by which the passengers may with safety step on or off the same while in motion, also by which the cars may be automatically controlled to travel out radially upon the wheel, remain near its periphery 15 for a prescribed number of rotations of the wheel, and then return radially to permit the passengers to disembark.

The invention consists in combining and arranging with a rotatable pleasure-wheel 20 carrying suitable cars or seats one or more intermediate rotatable platforms traveling at a lesser speed than the pleasure-wheel itself and forming a means of transfer from a central stationary platform to a rotating wheel, 25 or vice versa, and in means for automatically advancing and retracting the cars or seats 30 radially, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 represents a sectional elevation of the greater 35 portion of a pleasure-wheel embodying my improvements; Fig. 2, a plan of the same; Fig. 3, a view illustrating an alternative arrangement of parts in which the cars or seats are controlled from above instead of 40 below, as shown in the other views; Fig. 4, an elevation of a portion of the rim of the rotatable wheel, showing an end view of a car, &c. Fig. 5 is a vertical sectional elevation 45 taken through one of the cars; Fig. 6, a view of a car, taken inside of the wheel-rim. Fig. 7 is a view similar to Fig. 5, showing the trip-wheel lowered. Fig. 8 is a sectional view on line 8 8, Fig. 2; Fig. 9, a view of the trip-wheel and tripping-stud. Figs. 10 50 and 11 are views illustrating the engagement of the tripping-wheel with the advancing and retracting rails, respectively.

In the drawings, A represents the framework of the apparatus, B represent the usual canopy supported by rods b, and A' represent 55 radial horizontal girders supporting the advancing and retracting rails C D, as well as the pillow-blocks a, and pulley-bearings a' a' in turn supporting the rollers c c', upon which the rotatable wheel E and rotatable-platform 60 F rest.

G is a central circular stationary elevated platform, to which access is had by means of a central stairway or other mechanical expedient.

The rim e of the rotatable wheel E is grooved peripherally to receive the power-rope by which the wheel is rotated, as in the ordinary way, or the wheel may be rotated by any other appropriate means. The rim e is connected by means of radial string-pieces e' e' by an annular platform e<sup>2</sup>. These string-pieces e' perform the double function of acting as spokes for the wheel and being arranged in parallel pairs as rails for the cars 75 or platforms H. Intermediate between the platform e<sup>2</sup> and the stationary platform G is the annular platform F, upon the under side of which is fixed the circular rack f, engaging with the pinion f', secured to the cog-wheel e<sup>3</sup>, attached to one of the wheels c', said cog-wheel e<sup>3</sup> engaging with a circular rack e<sup>4</sup> on the inner edge of the wheel E. The relative diameter of the pinion f' and cog-wheel e<sup>3</sup> is such that the intermediate platform F travels slower than the platform e<sup>2</sup> on the wheel E, the object being to afford means whereby a person may step from the stationary platform G onto an intermediate relatively slow-moving platform F and from 80 thence to the platform e<sup>2</sup> without inconvenience or danger. It is obvious that more than one intermediate platform F may be used, if desired, without departing from the spirit and intent of my invention, the motion 85 being transferred from one to the other by a duplication of the racks and pinions shown.

The cars H are supported upon a truck H', upon which are mounted the upper and lower flanged wheels h, which engage with the upper and lower edges of the rails e'. A spindle S is mounted vertically in the truck H'. At the lower end of this spindle is affixed a bearing-wheel W for engagement with the advanc-

ing and retracting rails C D. Above the bearing-wheel W is a collar I, having radial projections  $i'$ . Within the frame of the truck H' is a stationary cam J, through which the 5 spindle S projects, said spindle being formed with a radial arm s, which rests upon the cam-surface. A spring  $s'$  is interposed between the upper part of the truck and said arm s and tends constantly to keep said arm in engagement with the cam-surface. The upper end of the spindle S is adapted to engage with a lever or wheel  $s^2$ , so that it may be turned manually to raise the spindle S until its arm s rests upon the flat horizontal portion  $j$  of the cam J against the resistance of the spring  $s'$ .

The forwarding-rail D is higher than the retracting-rail C. Both rails are eccentric with relation to the rotatable wheel E, their 20 inner ends coinciding practically in a vertical line, from which point they converge, so that their outer extremities approximately are a distance apart equal to the diameter of the bearing-wheel W.

25 T is a stud or projection supported upon a stationary part of the apparatus in a position beyond the annular advancing-rail D and nearly in line therewith. This stud T is for engagement with the radial projections  $i'$  upon the spindle S.

The operation is as follows, taking one car or platform H as an illustration for all: The car H being at the inner end of the rails  $e' e'$  and adjoining the platform  $e^2$  and it being 30 desired to start the car outward, the spindle S is turned by means of a hand-wheel or other mechanical expedient, forcing the pin s up the inclined surface of the cam against the resistance of the spring  $s'$ , and thereby raising the spindle so that its contact-wheel W is clear of the retracting-rail. The car is then pushed ahead a few inches in order to bring it into position for engagement with the inner end of the advancing-rail D. Under these 35 conditions the continuous rotation of the wheel E will naturally cause the rail D to push the car along the rails  $e' e'$  until its contact-wheel W is beyond the outer end of said advancing-rail D, the car then being just within 40 the rim e, against which the outer edge of the truck-frame H' rests. The car will remain in this position as long as the spindle-arm s rests upon the elevated horizontal portion  $j$  of the cam J. At each revolution of 45 the wheel E one of the arms  $i'$  of the spindle S comes in contact with the stationary stud T, thereby partially rotating the spindle S upon its longitudinal axis. Thus after a number of revolutions of the wheel E, corre- 50 sponding to the number of radial projections  $i'$  on the spindle S, the arm s on the spindle will be brought to the depression  $j'$  of the cam, into which it will be forced by the spring  $s'$  above, thereby lowering the roller W into 55 position for contact with the return-rail C, by which the car is retracted into its first position adjoining the platform  $e^2$ . The pas-

sengers are then allowed to alight, stepping from the platform  $e^2$  to the intermediate platform F and thence to the stationary platform G. Other passengers being admitted to the car the operation is repeated, and so on continuously for each car while the wheel E is in continuous motion. It will be noted that the car cannot be started outward until 75 it is pushed into position, thus guarding against premature or accidental movement and rendering the device safe.

By thus providing for the embarking and disembarking of different passengers without the stoppage of the rotatable wheel E, I effect a great saving in time, and therefore increase the earning capacity of the device, while adding to the novelty of its use. It will be seen that the cam J and the radial 85 projections  $i'$  on the spindle may be readily arranged in conjunction with a stationary stud T to retain the car near the periphery of the wheel E for any prescribed number of revolutions, more or less, within certain limits.

It is obvious that the same result may be attained by suspending the cars below the rails  $e' e'$  and arranging the advancing and retracting rails C D with the coöperating parts above instead of below, as indicated in 95 Fig. 3.

It is to be understood that in describing the rails  $e' e'$  as extending radially I do not wish to confine myself strictly to the identical arrangement of parts shown, since said rails 100 may be inclined more or less horizontally with relation to the axial line of the apparatus without materially altering the operation of the parts. It is also to be understood that I do not confine myself strictly to the means 105 herein shown of effecting the rotation of the wheel E, since any well-known mechanical expedient may be resorted to with like result.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a rotatable pleasure-wheel, formed with an annular rack-gear, a gear-wheel engaging with said annular rack, a pinion on said gear-wheel, an annular rack engaging with said pinion, an intermediate 115 annular platform attached to said last-named annular gearing, whereby the motion of the rotatable pleasure-wheel is transmitted at a reduced speed to the intermediate rotatable platform for the purpose set forth.

2. The combination of a rotatable pleasure-wheel, having radial rails, a car or platform mounted upon said rails, an eccentric advancing-rail, and an eccentric retracting-rail, and a wheel upon said power-platform arranged 125 to engage said eccentric advancing and retracting rails, substantially as set forth.

3. The combination of a rotatable pleasure-wheel formed with radial rails, a car or platform mounted upon said rails and with a contact-wheel adapted to be raised or lowered, and an eccentric advancing-rail and an eccentric retracting-rail upon a lower level than 130 said advancing-rail, for the purpose set forth.

4. In a rotatable pleasure - wheel formed with radial rails, a car or platform mounted on said rails, a contact-roller mounted adjustably upon said car or platform, an eccentric advancing-rail, acting against said contact-roller to push the car outward, an eccentric retracting-rail and means for automatically lowering said bearing-roller upon the car or platform to bring it into contact with the re- 5 tracting-rail, for the purpose of returning the car to its normal position, substantially as de- 10 scribed.

5. The combination of a rotatable pleasure-wheel E, with the annular rack  $e^4$ , the gear-wheel  $e^3$ , and pinion  $f'$ , the annular rack  $f$ , the annular platform F, and the central stationary platform G, the whole arranged and operating substantially in the manner and for the purpose described. 15

6. The combination of a rotatable pleasure-wheel E, the rails  $e'$ ,  $e'$ , the car or platform H, mounted thereon, the adjustable contact-wheel W, the eccentric advancing-rail D, and the eccentric retracting-rail C, for the purpose 20 and substantially in the manner described.

7. The combination of a rotatable pleasure-wheel E, having the rails  $e'$ ,  $e'$ , a car or plat- 25

form H, mounted upon said rails, the spindle S, on said car or platform provided with the roller W, the radial projections  $i'$ , on said spindle, the stationary cam J, the cam-arm  $s$ , on the spindle, the eccentric advancing and retracting rails C, D, and the stationary stud T, the whole arranged and operating substantially in the manner and for the purpose de- 30 35 scribed.

8. The combination of a rotatable pleasure-wheel E, having the rails  $e'$ ,  $e'$ , a car or platform H, mounted upon said rails, the spindle S, on said car or platform, provided with the 40 roller W, the radial projections  $i'$ , on said spindle, the stationary cam J, the cam-arm  $s$ , on the spindle, the spring  $s'$ , and means for raising the spindle manually against the resistance of said spring, the eccentric advancing and retracting rails, C, D, and the stationary stud or projection T, the whole ar- 45 ranged and operating substantially in the manner and for the purpose described.

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