(No Model.) 3 Sheets—Sheet 1.

J. W. DANIELS.

ELECTRIC RACE HORSE CAROUSEL.

No. 583,109. Patented May 25, 1897.

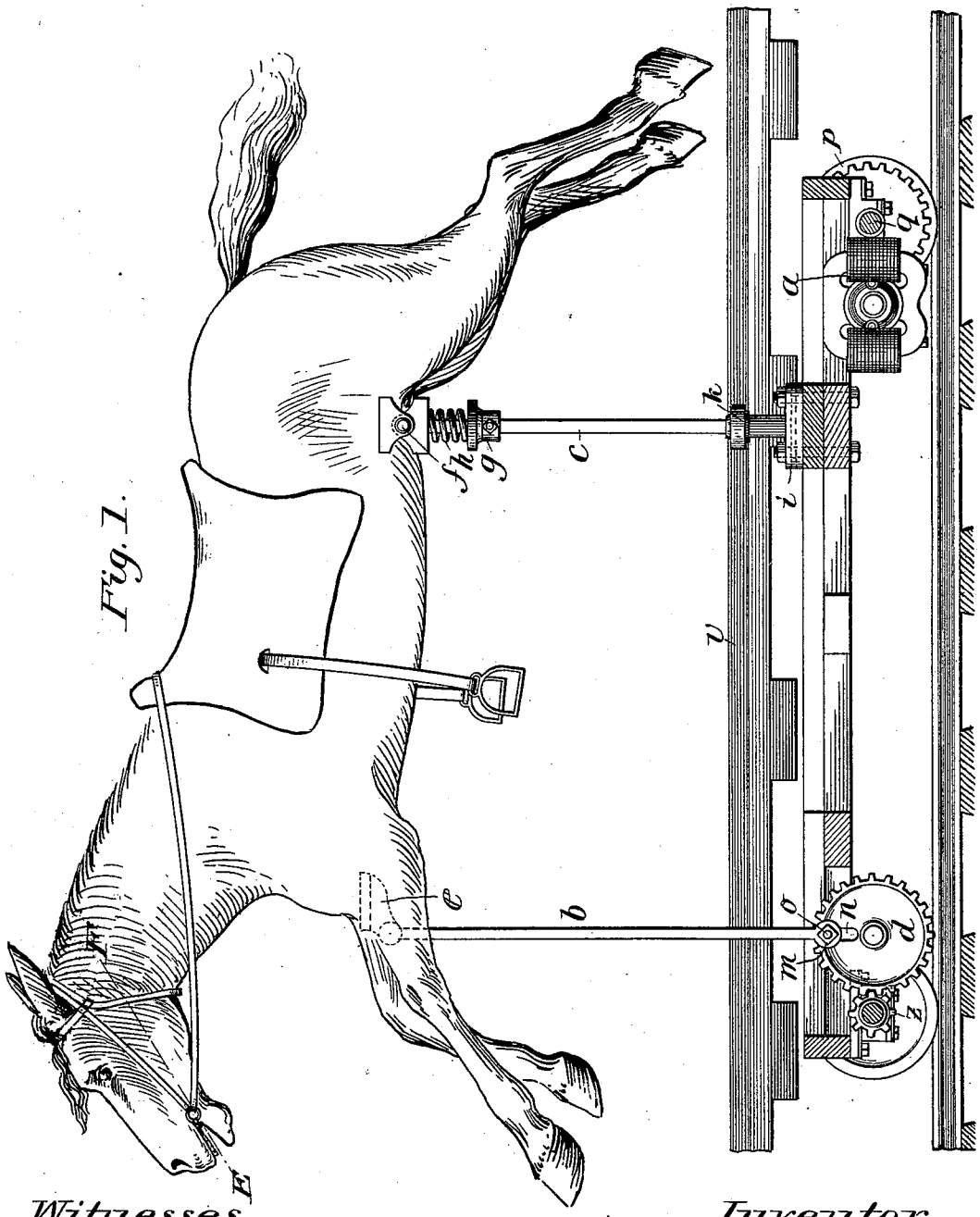

Fig. 1.

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Fig. 2.

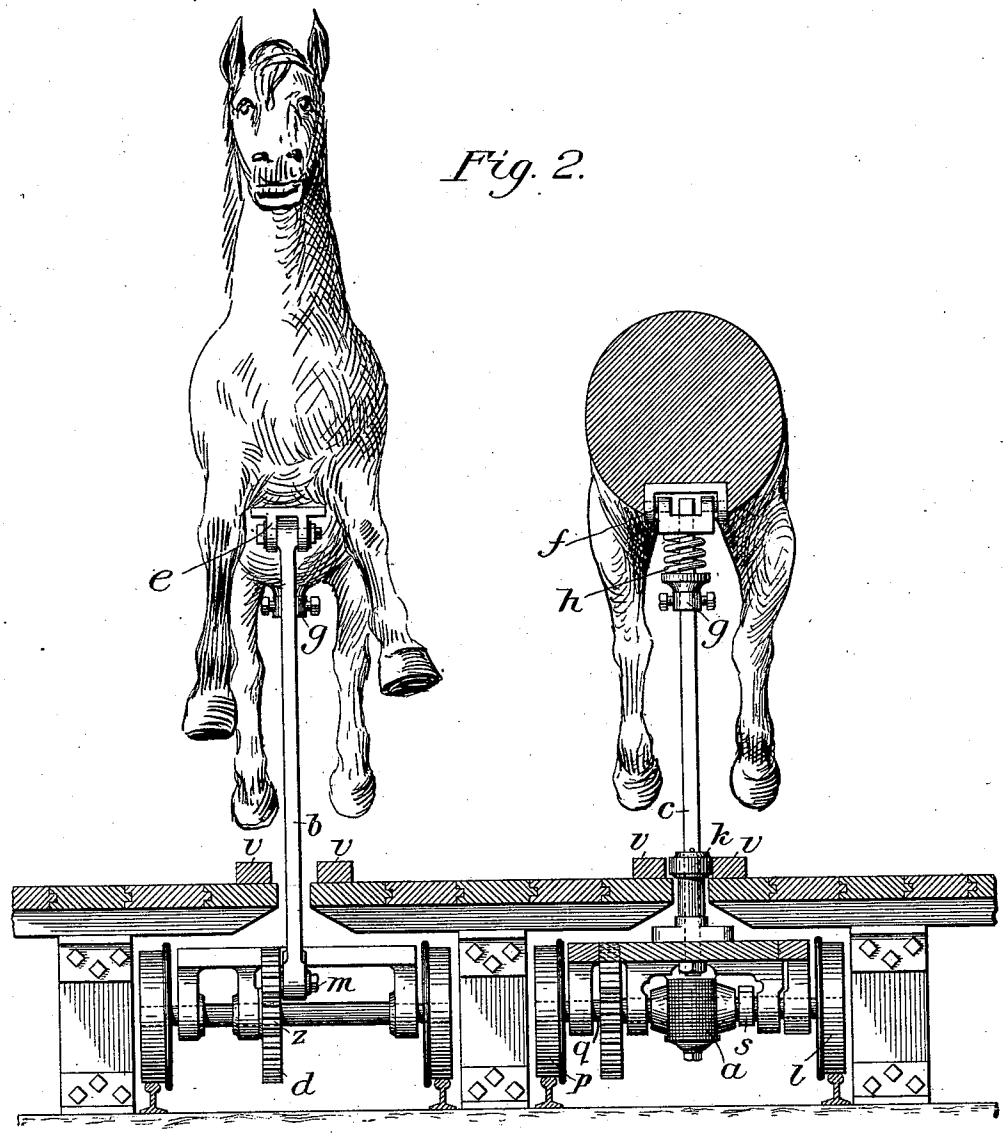

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Fig. 5.

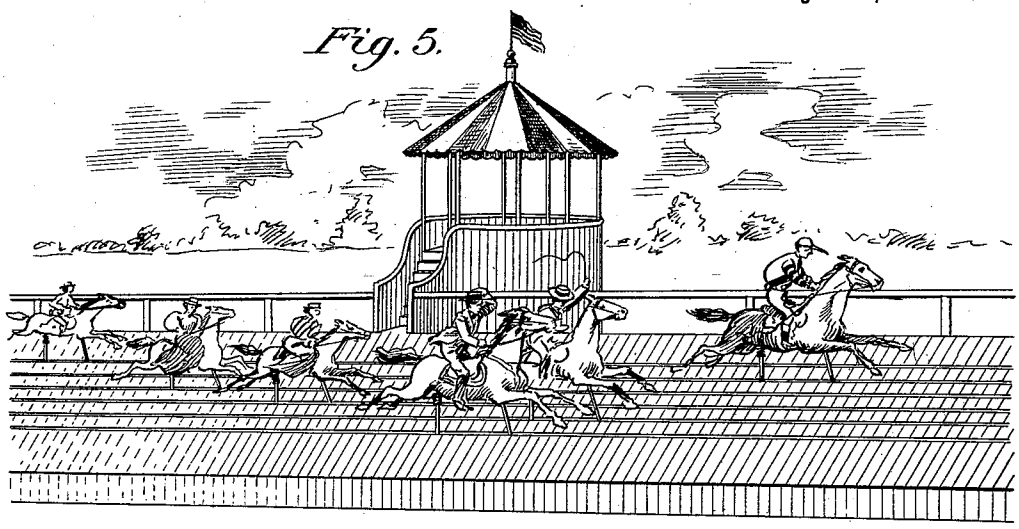


Fig. 3

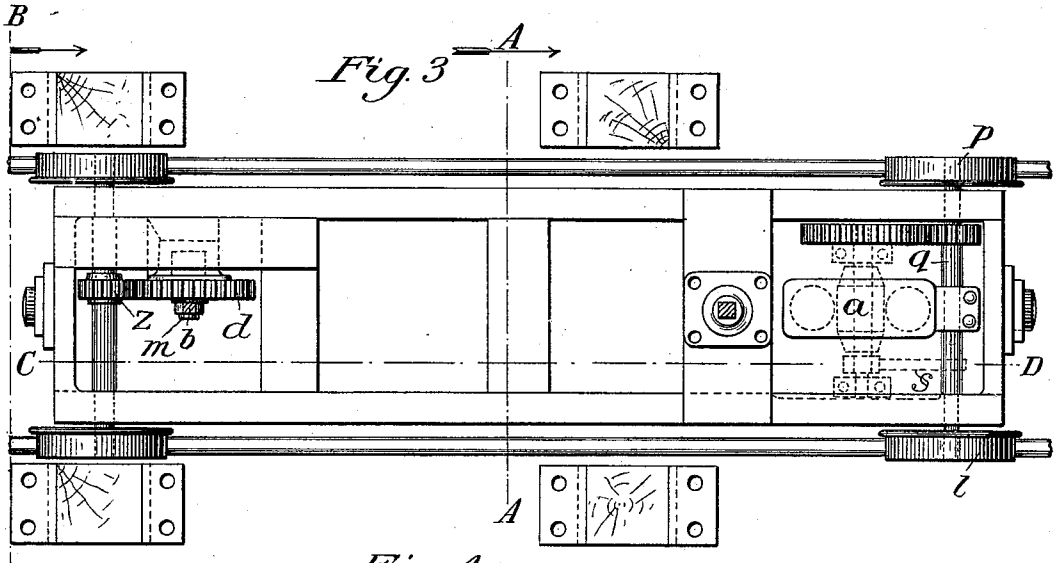
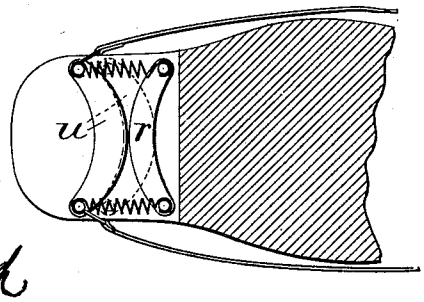


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES WASHINGTON DANIELS, OF PATERSON, NEW JERSEY.

ELECTRIC RACE-HORSE CAROUSEL.

SPECIFICATION forming part of Letters Patent No. 583,109, dated May 25, 1897.

Application filed October 28, 1896. Serial No. 610,282. (No model.)

To all whom it may concern:

Be it known that I, JAMES WASHINGTON DANIELS, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Electric Race-Horse Carousels, of which the following is a specification.

My invention relates to improvements in carousels or merry-go-rounds for racing purposes, in which the horse or other figure is under control of the rider as to speed and stopping and starting; and the objects of my improvements are, first, to provide an electrical motor for operating all of the horses simultaneously from a single battery; second, to provide an independent motor mechanism for each horse, and, third, to provide means for enabling the rider of each horse to control the starting, stopping, and speed of the horse. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a horse and a sectional view of the truck on lines C D of Fig. 3. Fig. 2 is a front representation of the horse and a sectional view of the truck on lines B B of Fig. 3 and a sectional view of the horse and truck on the lines A A of Fig. 3. Fig. 3 is a top plan view of the truck with the horse removed; and Fig. 4 is a view of the horse's head, partly broken away, showing the mechanism for controlling the flow of electricity to the motor mechanism. Fig. 5 is a perspective view of the apparatus, showing the slotted platform and the figures with their riders mounted thereon.

Similar letters refer to similar parts throughout the several views.

This apparatus consists of the ordinary slotted platform, built in circular or elliptical form, underneath which are trucks mounted upon railway-tracks in the usual manner.

The trucks in my invention are operated by electric gear-motors *a* (shown in Figs. 1, 2, and 3) suspended on the rear axle of said trucks. The wooden horses are supported on rods *b* and *c* and are connected in front to an adjustable gear-crank *d* and receiving an up-and-down motion therefrom when the truck is in motion. The back rod *c* rests rigidly on the truck. The body of the horse rests on the upper end of said rods on hinged brackets *e* and *f*. The rod *c* is rectangular in cross-section and is provided on the top by a hinge *f*, the upper part of which is attached to the body of the horse, which keeps said horse from lateral motion. The rest *g* of the spring *h* is rigidly fixed to the rod *c* by set-screws and supports the coil-spring *h*, which receives part of the energy of the rider's body while in motion on the horse's back. The lower part of the rod *c* rests on a rigid support *i* next to the top of the truck and has at a certain distance above the platform-slot a roller *k*, freely revolving between two guards near the slot, thus keeping the rod in vertical position. The electric current is fed through one rail, while the other serves to complete the circuit, the positive current entering the wheel *p* and axle *q*, which is insulated from the wheel *l*, and through sliding contact *s* on axle enters the commutator-brushes and armature of the motor when the connection is made. The mechanism for making and breaking the circuit is shown in Fig. 4 and rests inside the horse's mouth. It is controlled by the rider by pulling on the reins, (clearly shown in said figure,) which are attached to segments *u* and *r*, said segments being connected by suitable wires to the electric mechanism. They are normally kept separate by insulated coiled springs, as shown in the drawings. In the front part of the truck a gear-wheel *d* is mounted, which meshes with a pinion *z*, which is rigidly attached to the front axle. Said gear-wheel has a wrist-pin *m* attached near its periphery, upon which is mounted the rod *b*, which supports the front part of the horse, by means of a jointed bracket *e*. The range of up-and-down movement of the horse is regulated by moving the wrist-pin *m* up or down in the slot *n* of gear-wheel *d*.

The truck receives its primary motion from the electric motor on the rear axle; but by the mechanism just described the motion can be accelerated and the speed increased by action of the rider of the horse. By applying skilfully his own weight increases the momentum and enables one rider to get ahead of the others of his racing companions just in proportion to his skill and strength in manipulating the device. Another element which increases or diminishes the speed resides in

the mechanism in the horse's mouth for making and breaking the circuit, which may be increased or diminished at the will of the rider within certain limits by making the connection more or less complete. Another resultant object of this mechanism is to enable the rider to stop or start his horse at will by having under his control the circuit-breaking mechanism—pulling on the reins making the connection and slacking the reins breaking it, as is obvious from the drawings.

The four-wheel truck can be superseded by a two-wheel truck built on the bicycle system running on one rail only, which is the current-feeder to the motor placed on the back wheel, and the back current can be conducted through the roller *k* and one of the slot guard-rails *v*. The current is to be supplied from a central station and may be of variable voltage, from seventy-five volts up, not exceeding two hundred volts, carried by carefully-insulated wires to the switch *u* and *v* in Fig. 4. The motor may be either a reduction-gear motor or a direct axle motor.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a carousel a series of horses or other figures adapted for riding and mounted upon suitable mechanisms carrying independent motors said motors deriving their power from a common source and each provided with auxiliary propelling mechanism for increasing its speed at the will of the rider independently of the other mechanisms in the series, substantially as set forth.

2. In a race-carousel the truck having the standard *c* with the horse or other figure adapted to be used as a seat for a rider pivotally mounted upon said standard, in combination with the standard *b* pivotally attached to the forward end of said figure and connected by its lower end to a crank-pin mounted upon a gear-wheel for connecting said gear-wheel to the axle of the truck and provided with mechanism to enable the rider to increase or decrease the speed of the truck independent of the primary moving mechanism, substantially as described.

3. In a race-carousel the combination of the truck having the electric motor attached to the rear axle, the figure or horse mounted upon said truck with a circuit-breaking mechanism or switch mounted in the mouth of the said figure or horse and adapted to be operated by means of the reins, substantially as described.

4. In a race-carousel the combination with the truck of a rocking horse or other figure mounted thereon and adapted to propel said truck when a rocking motion is imparted to said horse, and provided with means to enable the rider to control the speed of said truck independently of the primary motive power normally propelling said truck, as and for the purpose set forth.

5. In a race-carousel the combination of a truck with a primary motive power attached thereto with an auxiliary motive power adapted to be operated by the rider to increase or decrease the speed of said truck independently of the primary motive power, substantially as described.

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

JAMES WASHINGTON DANIELS.

Witnesses:
THOMSON JAY HUDSON,
GEORGE W. COX, Jr.