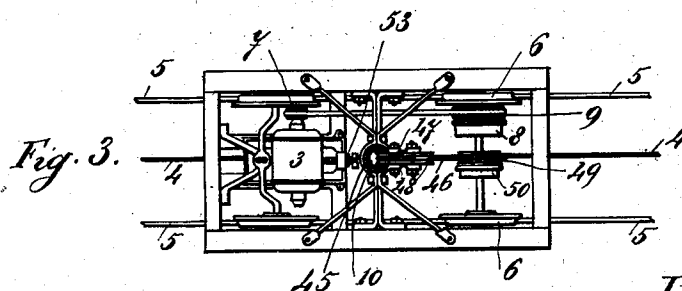
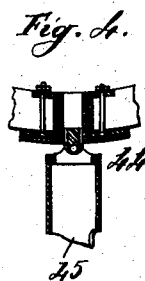
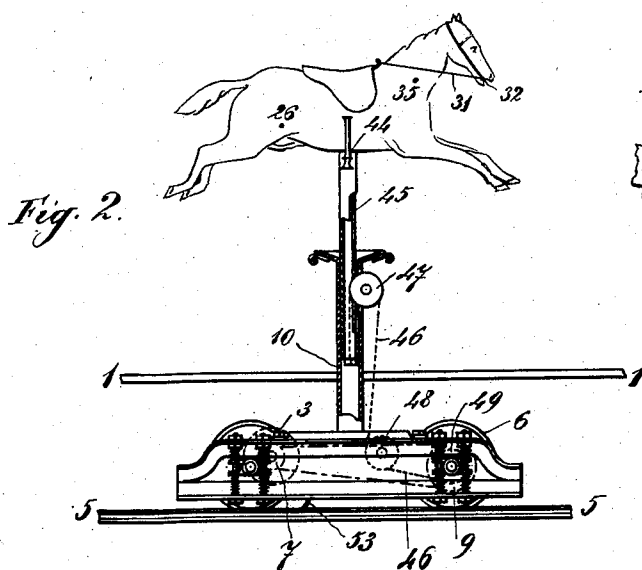
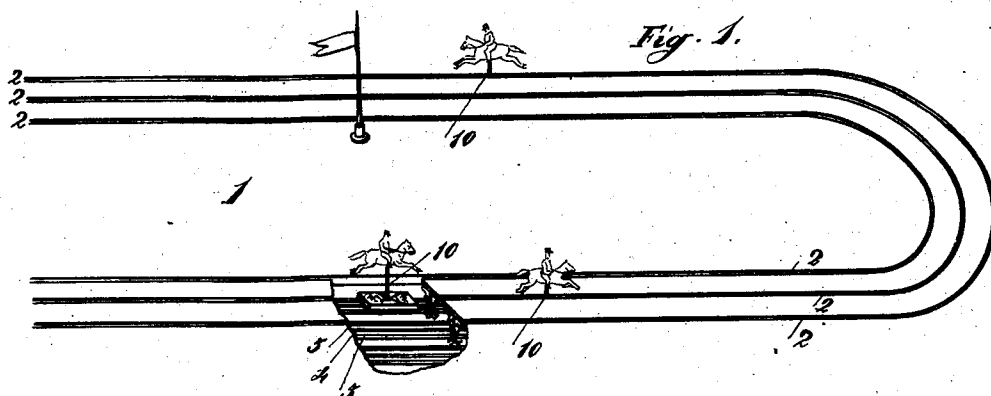


G. MAJNO.
ELECTRIC FIELD GAME.
APPLICATION FILED MAR. 26, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
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No. 737,257.

PATENTED AUG. 25, 1903.

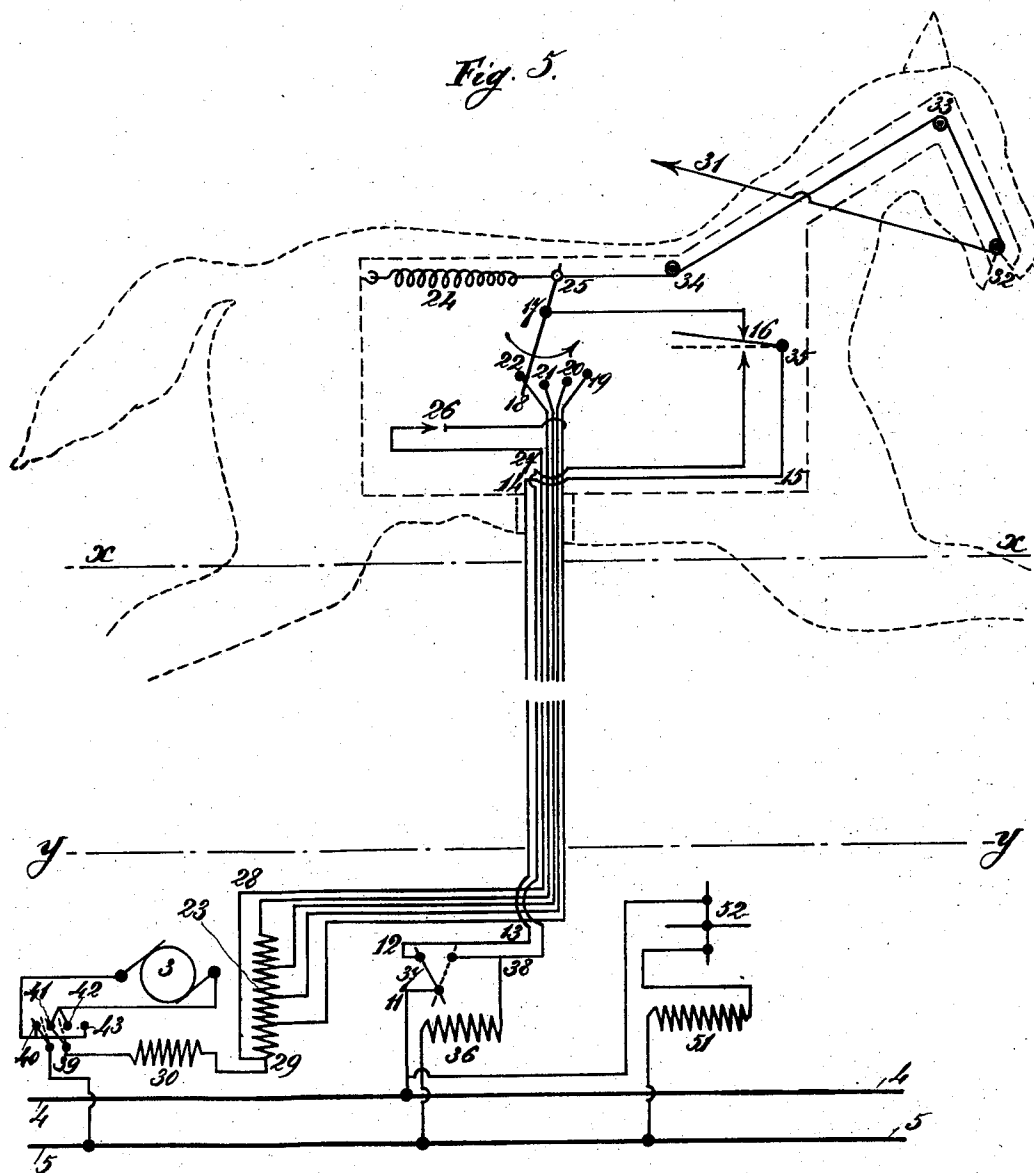
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UNITED STATES PATENT OFFICE.

GERARDO MAJNO, OF MILAN, ITALY.

ELECTRIC FIELD GAME.

SPECIFICATION forming part of Letters Patent No. 737,257, dated August 25, 1903.

Application filed March 26, 1902. Serial No. 99,990. (No model.)

To all whom it may concern:

Be it known that I, GERARDO MAJNO, gentleman, a subject of the King of Italy, residing at 9 Via S. Andrea, Milan, Italy, have invented new and useful Improvements in Electric Field Games; 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.

My invention refers to improvements in electric field games. According to it one or several cars are caused to run upon one or several tracks parallel to each other and having a preferably closed shape. Each car is fitted with a seat having the form of an animal, preferably a horse, and the person mounted on the back of the horse is with the aid of the electrical contrivances put at his disposal or worked by the attendants enabled to cause the artificial horse to imitate the movements of a living animal, so as to transform the whole arrangement into a race-ground for electric steeplechase.

The invention is shown by the accompanying drawings, of which—

Figure 1 is a perspective view of the whole arrangement. Fig. 2 is a side elevation of a car with the horse-shaped seat. Fig. 3 is a plan of the car. Fig. 4 is a detail view of the connection between the artificial horse and the post projecting upward from the car. Fig. 5 is a diagrammatic sketch of the electrical contrivances.

1 is the race-ground, in which as many slots 2 2 2 are provided as there are cars to be run, such slots being traversed by the posts 10, connecting each car with the corresponding seat or artificial horse, and therefore being arranged on a line standing vertically above the geometrical axis of each track. The motion is imparted to the car by means of an electric motor 3, receiving the current from the bar or wire 4, laid down in correspondence with the geometrical axis of the track 5 5, through a brush 53, sliding along said bar or wire 4. The driving-wheels 6 receive the motion from the motor through a couple of pulleys 7 9. The return of the current takes place through the rails 5 and the earth, as is usually the case with overhead-trolley railways. The means by which the different

movements may be obtained, as well as the speed controlled, will be understood with reference to Fig. 5, which shows the parts contained within the body of the horse, the parts located within the post 10, (between the lines $x x$ and $y y$), and the parts mounted on the car below the line $y y$. The current entering from 4 proceeds through 11 12 13 14 15 16 17 18 to the rheostatic controller, whose contacts are shown at 19 20 21 22, and the resistance-coils, divided into four sections, are shown at 23. The lever 25 18, fulcrumed at 17, is pulled by the spring 24 in the direction of the arrow and normally closes the circuit at 19, when all the sections but one of the resistance-coils 23 will be out of circuit and the speed will reach its maximum value under normal conditions. Should it be desired to simulate that the rider, spurring up his horse, pushes it forward with a violent rush a stud at 26 must be resorted to in order to close the circuit along 26 27 28 29, when the whole of the resistance-coils will be short-circuited and the armature of the motor attain a still greater speed than possible under normal circumstances. The current on leaving the resistance-coils 23 flows through the field-magnet 30 of the series-wound motor 3, then proceeds through the winding of its armature, and discharges to earth through the rails 5.

The rheostatic controller-lever 25 18 is worked by the rider with the aid of the reins 31, entering the body of the horse through its mouth, turning around the small pulleys 32 33 34, and connected with an eye at the end 25 of the aforesaid lever. It will be easily understood that by reining up more and more resistance-coils are inserted and the speed correspondingly reduced, while when left to itself the horse will run at full speed—i. e., the maximum speed under normal circumstances—the circuit being closed at contact 19 by means of the lever 25 18, acted upon by the spring 24. By pulling down the free end of the lever 16, fulcrumed at 35, the rider is at liberty to exert a braking action on the horse. The circuit feeding the motor is thereby interrupted and the current flows through the coil 36 of the electric brake 8, which, attracting the pulley 9, prevents it from turning and brings the driving-wheels 6 to rest. The braking action may be brought about au-

tomatically at a given point of the path by causing the lever 37 to turn from the position shown in full lines to that shown in dotted lines, when the motor-circuit will be interrupted and the brake-coil circuit closed through
 5 4 11 37 38 36 5.

The direction in which the horse is run may be reversed by means of the bipolar switch 39—
 10 i.e., causing the circuit to be closed through the contacts 42 43, instead of through the contacts 40 41, as shown in full lines, Fig. 5. The horse, resting on the saddle 44, Figs. 2 and 4, which allows of a certain degree of lateral oscillation, is mounted on a spindle
 15 45, which is capable of receiving a to-and-fro movement along the axis of the tubular post 10. During the normal running the spindle 45, as well as the horse, are in their undermost position; but they may be raised and brought
 20 to their uppermost position (shown in Fig. 2) by means of the rope 46, turning around the guide-pulleys 47 and 48 and winding itself around the pulley 49, which is loosely mounted on the axis of the driving-wheels 6, but
 25 may be made fast thereto by means of the electromagnetic clutch 50, Fig. 3. The magnetizing-coil of said clutch is shown at 51, Fig. 5. Its circuit may be either interrupted or closed by means of the switch 52, which is
 30 provided with two contacts and turns about ninety degrees on dashing against obstacles at predetermined points of the path. When the circuit of the coil 51, which was formerly interrupted, gets abruptly closed, clutch 50
 35 will at once engage with pulley 49 and the horse will suddenly jump up, simulating the leap over the hedge. On the circuit of coil 51 being interrupted again the weight of the horse will return it in its undermost position.
 40 It will be understood that the revolution of the switch 52 upon its axis by the contact of either of its projecting arms with an obstacle on the ground may be utilized in many ways to open or close the shunt-circuit on
 45 which the magnetizing-coil 51 is included.

Having now described my invention and the manner in which the same is to be performed, what I claim is—

1. An electric game consisting of a race-
 50 ground with tracks situated below the same on which electrically-driven cars run, such cars carrying posts which go through slots provided for in the race-ground and carry

horse-shaped seats for the rider who has at his disposal means for controlling the speed
 55 by acting on the reins and means within the supports of the seats for giving vertical to-and-fro movement to the seats.

2. An electric game consisting of a race-ground with tracks situated below the same
 60 on which electrically-driven cars run, such cars carrying posts which go through slots provided for in the race-ground and carry horse-shaped seats for the rider in combination with an arrangement as hereinbefore described under the control of reins carried by
 65 said seat and according to which the horse, when left to itself, runs full speed.

3. An electric game consisting of a race-ground with tracks situated below the same
 70 on which electrically-driven cars run, such cars carrying posts which go through slots provided for in the race-ground and carry horse-shaped seats for the rider in combination with means as hereinbefore described
 75 for obtaining a rush as if the horse had been spurred by his rider.

4. An electric game consisting of a race-ground with tracks situated below the same
 80 on which electrically-driven cars run, such cars carrying posts which go through slots provided for in the race-ground and carry horse-shaped seats for the rider, vertical slidable supports for said seats, an oscillating
 85 connection for each seat on said slidable support in combination with means as hereinbefore described for interrupting the circuit of the motor and actuating a brake.

5. An electric game consisting of a race-ground with tracks situated below the same
 90 on which electrically-driven cars run, such cars carrying posts which go through slots provided for in the race-ground and carry horse-shaped seats for the rider and a vertical
 95 slidable spindle and tubular support for each seat to allow vertical to-and-fro movement of the seat in combination with means as hereinbefore described for causing the horse to suddenly jump up simulating the leap over the hedge.
 100

In witness whereof I have hereunto set my hand in presence of two witnesses.

GERARDO MAJNO.

Witnesses:

MICHELEDE DRAGO,
 VIRGINIO CARNEVALI.