

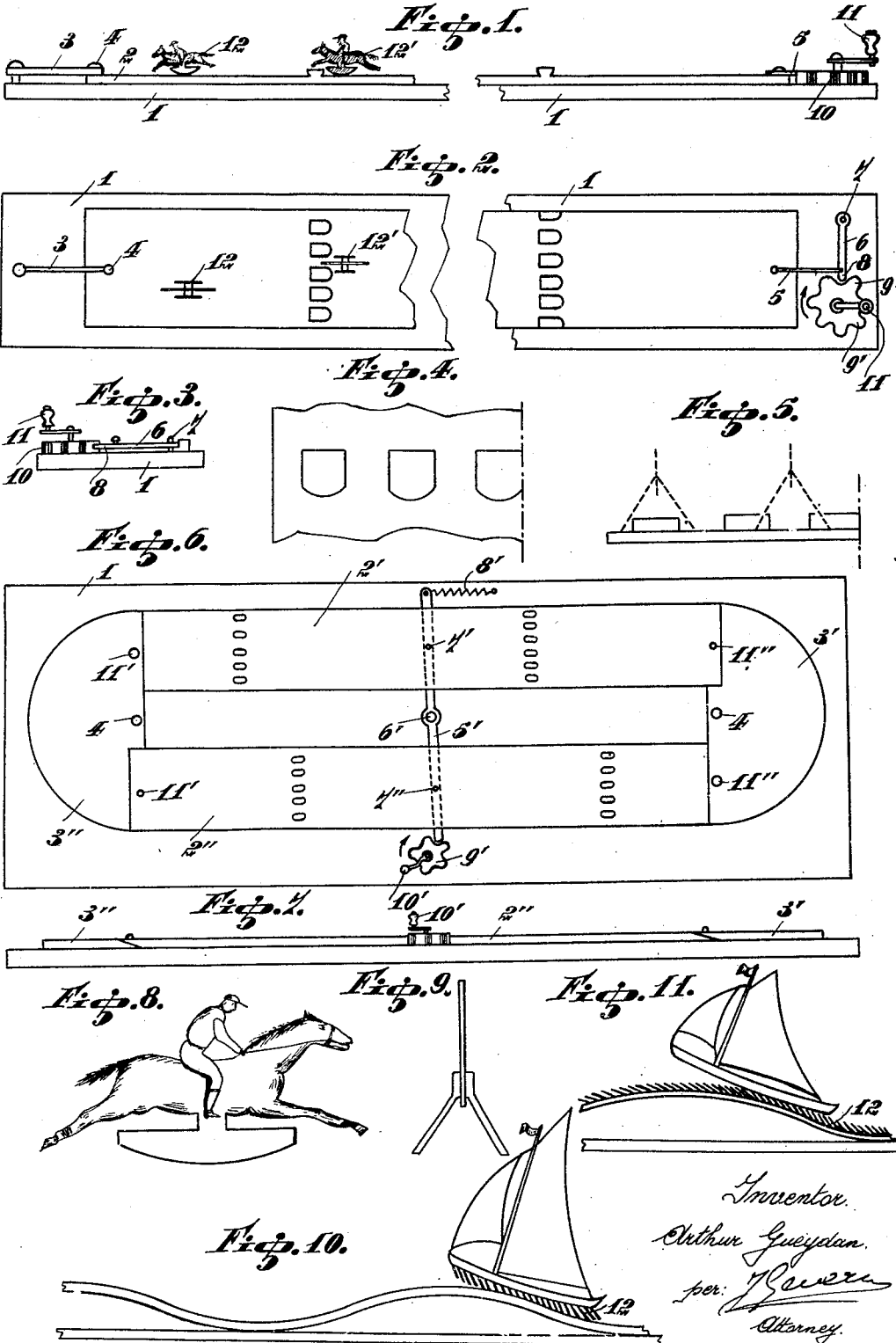
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APPARATUS FOR AMUSEMENT AND OTHER PURPOSES

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APPARATUS FOR AMUSEMENT AND OTHER PURPOSES

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The present invention consists in a device which will allow the progressive movement of articles along tracks of any desired form, said device being more particularly applicable in toys and race-games.

The device is mainly characterized by the fact that it has a supporting surface to which a short reciprocating movement is communicated, the two strokes of this movement being of unequal speed, so that an article set upon said surface will not move with the surface during its faster stroke. When however its coefficient of adherence is sufficient, the article will share the movement of its support during its slower stroke. The article is thus moved with respect to the supporting surface in the direction of the initial slow stroke. Means are provided for repeating said reciprocating movement, to impart a progressive movement to the article. Such means can preferably be a spring, and a rotary toothed wheel, the teeth of which act upon an abutment connected with the supporting surface; such means can however be of other construction and controlled by hand, clockwork or other mechanical system such as an electric motor.

In the form of embodiment applicable to race games, the supporting surface will present obstacles and the movable articles or figures will be provided with a particular rocking base formed by two curvilinear blades which will prevent their deviation and automatically redress them in the direction of the run, when being turned aside by said obstacles. The movable article may be a reduced reproduction of a racing horse, a motor car, a boat or other object representing an article capable of an appreciable speed.

In another form of embodiment the figures will run upon a track composed of sections forming a closed circuit.

The movable article can present a contacting surface such as to prevent its return movement and be provided with nonreturn features, such as plush or panne velvet, to secure its position upon the supporting surface when said surface will be inclined or undulated.

The invention will now be described with reference to the accompanying drawings, in which different examples of embodiment are illustrated.

Fig. 1 shows in lateral elevation a device in the form of a straight race game;

Fig. 2 is a plan view of said device;

Fig. 3 is an end elevation;

Fig. 4 is a partial view of the supporting surface having raised obstacles;

Fig. 5 is a side elevation of Fig. 4;

Fig. 6 is a plan view of the embodiment in which the article will move over a composite track forming a closed circuit;

Fig. 7 is an elevation of the device of Fig. 6;

Fig. 8 is a side elevation of a particular construction of the moving article;

Fig. 9 is an end view thereof;

Fig. 10 illustrates in section a part of an undulated supporting surface, and how a moving article will be supported thereon.

Fig. 11 illustrates a section of an undulated supporting surface provided with non-return features.

In the device illustrated in Figs. 1 to 3, 1 is a rigid board supporting the movable surface 2 forming the race track. This movable plane is coupled to the board by means of a spring 3 fixed at the end 4; at the opposite end the movable plane is connected axially by means of a shank 5 with the lever 6, one end of which is mounted pivotally upon axis 7; the other forms an abutment 8. Said abutment will be acted upon by the teeth 9, 9', of a toothed wheel 10, which is driven by the crank 11, said wheel being mounted upon the base plate 1 in suitable bearings for its shaft. 12 and 12' are the figures progressing upon the surface 2.

The board can be made of any solid material, such as wood, or cardboard, and the movable plane can be made of fabric, cardboard, tin or other similar material. The spring 3 can be formed of a piece of rubber. The toothed wheel 10 and the lever 6 can be made of metal, fibre or other material. The distance between the teeth of the wheel will preferably be of reduced size so that the vi-

brations of the supporting surface cannot be perceived.

The obstacles can be placed on the track surface as illustrated in Figs. 4 and 5; the Fig. 5 shows how the movable articles come against or across said obstacles.

In the form of embodiment illustrated in Figs. 6 and 7, the base of the device is formed with a rigid and plane board 1 upon which are two rectilinear tracks 2' and 2'', which are connected endwise with two semi-circular tracks 3' and 3'', mounted pivotally upon axis 4. These different tracks will constitute a closed circuit and a reciprocating movement of unequal speed for each stroke is imparted thereto by means of a lever 5' pivotally mounted upon a shaft 6' in the centre of the circuit. The lever is provided in view of acting upon the track-parts with pins 7' and 7'' which form pivots engaging holes in the track-parts 2' and 2''; one end of the lever 5' is connected to the base plate 1 by means of the elastic connection or spring 8' and the other end of said lever is in engagement with the pinion 9' which can be rotated by means of the crank 10'.

When driving the crank 10' in the direction of the arrow, the end of the lever 5' is alternately shifted and released, so as to communicate a reciprocating movement to the tracks 2' and 2'' which in turn will communicate a reciprocating movement to the track-parts 3' and 3'', the latter being connected to the former by means of the pins 11' and 11''.

Upon straight race tracks, and upon those having a curved course, articles can be moved such as illustrated in Figs. 8 and 9, which represent a horse-man 8. Said articles are provided with a particular rocking base formed with a double arched blade, for instance of celluloid, said blades being bent outward as illustrated in Fig. 9. Said base, the two points of which contacting the track tend to remain on a line at right angles to the direction of the track motion, will allow the article to maintain its normal position.

A race-game comprising the device of the present invention will allow the imitation of any form of race-course and the racing figures starting simultaneously on the track will run in such a manner as to produce the illusion of reality, passing over obstacles, losing or gaining ground and arriving at the winning post in an unforeseen order.

The device can find its application in various kinds of race-games. The track can for instance represent the sea surface and will be in that case provided with an uneven surface in the form of undulations such as shown in section in Fig. 10. In such device the moving article may represent a sailing boat, for instance, and will be provided, on its contacting surface with the track, with rough material presenting nonreturn features, such as plush or velvet 12, the hairs of which are

inclined backwards to prevent the return movement or slipping of the article when ascending the wave-formed undulations.

The supporting surface itself can present nonreturn features and be coated with plush or velvet cloth fastened to it; in that case the movable articles can present a smooth contacting surface, as shown in Fig. 11. It will be seen that when plush or the like is used, the direction in which the racing figures will move merely depends on the direction in which the hairs of the plush are inclined, and regardless of whether the two strokes of reciprocating motion are of equal or unequal speeds.

While some preferred forms of embodiment have been described, it is to be understood that changes and modifications within the scope of the appended claims may be resorted to whenever it is deemed desirable.

I claim:

1. A device for making articles travel independently over a supporting surface, comprising a rigid base plate, two movable rectilinear track-parts disposed at some distance apart the one from the other, two semi-circular track-parts pivotally mounted upon the base plate and pivotally connected with the rectilinear track-parts so as to form a closed circuit, and means to impart a repeated reciprocating movement to the track-parts, substantially as described.

2. Apparatus for making articles travel on an independent supporting surface, comprising: a rigid base plate, a plurality of movable rectilinear track parts, a plurality of curvilinear track parts pivotally mounted upon the base plate and pivotally connected with the movable rectilinear track parts, so as to form a curved course, and means to impart a rectilinear reciprocating movement simultaneously to all of said rectilinear track parts and at the same time to impart a curvilinear reciprocating movement to all the curvilinear parts.

3. An amusement apparatus comprising a plane table, a track provided with obstacles and formed with a number of straight parts connected to curved parts adapted to move concentrically about their centre of curvature, a resilient means pulling the track in one direction, a rotatable toothed wheel cooperating with a lever adapted to pull the track intermittently in the opposite direction, said means being fixed under the tracks and a series of racing figures provided each with a convex rocking base whereby the figures will follow automatically the bent line of the track without deviation.

4. In an amusement apparatus of the character described, the combination of a track surface with undulations constituting obstacles, means to impart a reciprocating motion to the track, and objects to be moved thereon provided with a base coated with

pilose material the hairs of which contacting the track are bent in a same backward direction thereby permitting the moving object to ascend the rising side of the undulations.

5 5. In an amusement apparatus of the character described, the combination of a track having its face coated with pilose material the hairs of which are bent in a direction substantially parallel to the tracks line, means
10 to reciprocate said track and objects to be moved freely upon same provided with a convex blade whereby they will automatically travel in the direction of the course.

6. In amusement apparatus of the character described, the combination of a track
15 forming a curved race-course, means adapted to impart a reciprocating motion to the track, and objects to be moved upon the track, said objects being provided with a rocking base
20 permitting the objects to travel automatically in a direction parallel to the track line.

7. In an amusement apparatus of the character described, the combination of a track having obstacles on its face, means adapted
25 to reciprocate said track, and a series of figures to be moved freely thereon comprising each a curved rocking base whereby they automatically maintain a correct position.

8. In an amusement apparatus, the combination of a reciprocable track and series of
30 figures provided each with a base coated with plush or the like material having hairs bent in a backward direction.

In testimony whereof I affix my signature.
35 ARTHUR GUEYDAN.

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