

N^o 27,533



A.D. 1910

Date of Application, 26th Nov., 1910

Complete Specification Left, 26th May, 1911—Accepted, 27th July, 1911

PROVISIONAL SPECIFICATION.

An Improved Toy or Game.

I, FRANK HORNBY, of 274, West Derby Road, Liverpool, Manufacturer, do hereby declare the nature of this invention to be as follows:—

This invention relates to an improved toy in which a moving body such as an engine or the like, which may be propelled by its own power or actuated by the operator, is adapted to travel along a track, various points on the track being required to be closed in order to ensure that the engine or the like shall reach its final destination.

The track is preferably constructed by stamping up rails from a sheet metal plate, the rails curving round the plate and crossing. The metal is embossed to imitate the undulating character of a country and small tunnels may be formed of sheet metal and fastened to the metal plate by clips. At intervals along the curves of the track are arranged tangentially formed branch sidings controlled by pivoted points which are normally kept open by springs so that the engine or the like will tend to pass into the sidings from the main track. These points are operated by levers disposed at the side of the plate and articulated to the points in any suitable manner. The levers are preferably arranged to effect the closing of the points by different or opposite movements so that more care is needed to remember the manner in which each lever acts.

In utilising the toy as a scoring game, a number is allocated to each siding and a larger number to the end destination of the line. In this way the score is made by noting the siding into which the engine or the like is allowed to pass by the player neglecting to operate any particular point, or if the engine successfully arrives at the final destination the larger score is made.

Instead of an engine moving by its power—such as a clockwork train—a rolling ball may be utilised, corresponding modifications being effected in the track, the base plate being in such a case tilted by the operator to cause the ball to be propelled along the track by its own rolling action. If desired the track may be so arranged that the final set of points may deflect the engine or the like on to the initial portion of the track, and in this way cause the run of the engine to be continuous.

Dated this 23rd day of November, 1910.

For the Applicant,

A. J. DAVIES,
Patent Agent by Examination,
37, Moorfields, Liverpool.

COMPLETE SPECIFICATION.

An Improved Toy or Game.

I, FRANK HORNBY, of 274, West Derby Road, Liverpool, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to
[Price 8d.]



Hornby's Improved Toy or Game.

be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in that kind of toy or game apparatus in which a plate provided with ridges or the like is tilted, oscillated or moved by the operator, and provided with an engine, ball or the like, so that the ball or engine may be steered along the ridges. The features of the present invention consist in providing a plate with a rail track having a series of branch sidings controlled by pivoted switch points normally kept open and adapted to be operated by levers or handles and an engine or the like propelled by its own power, or otherwise, running on the rails, whereby the engine or the like may be caused to travel along the track and avoid the sidings controlled by the pivoted switch points. Further features of the invention relate to means for starting the engine, for counting the number of complete journeys made round the track, and for wrecking the engine.

The invention is illustrated in the accompanying drawings, in which, Fig. 1. is a plan view of a toy constructed in accordance with this invention. Fig. 2, is a transverse section on the line A—A of Fig. 1. Fig. 3. is a fragmentary section on the line C—C. Fig. 4. is a similar fragmentary section on the line B—B, and Fig. 5. is a further fragmentary section on the line D—D.

In carrying out the invention the track is preferably constructed by stamping up rails 1 from a sheet metal plate 2 the rails curving round the plate and crossing at certain points as shown. The metal plate may be also embossed at certain places 3 to imitate the undulating character of a country, and small tunnels (not shown in the drawing) may, if desired, be provided formed of sheet metal and fastened to the metal plate by clips. At intervals along the curves of the track are arranged branch sidings 4, controlled by pivoted points 5, which are normally kept in such position that the engine or the like will tend to pass into the sidings from the main track. These points are operated by levers 6 mounted in a casing 14 on the side of the track, and articulated to the points 5 by means of rods 8 connected to lugs 5^a on the points 5 pivoted at 5^b. These rods 8 may be coupled above or below the pivots of the levers 6, as shown in Fig. 2., so as to require different or opposite movements to effect the closing of the points, and in this way more care is needed to remember the manner in which each lever acts, and the difficulty of the game correspondingly increased. The rods 8 are fitted with springs 9 enclosed between a collar 9^a on the rod and an abutment 9^b carried from the plate, so that the operation of any point results in the compression of the springs 9. The levers 6 may be coupled direct to the points, or through the medium of rocking levers 10 pivoted at 11 to the plates. The ends of the sidings are provided with spring buffers 12, and the operating levers 6 are conveniently mounted on a shaft 13 disposed within a curved casing 14.

A starting mechanism consisting of a trigger 15 may be provided, said trigger being pivoted at 16, and adapted to work within a slot 17 in the plate and being articulated by a spring controlled rod 17^a and bell crank 17^b to one of the levers 6 in the manner previously described, the engine or the like movable object being placed over the trigger mechanism and released by the operation thereof, in any wellknown manner.

In utilising the toy as a scoring game, a number is allocated to each siding and a larger number to the end destination of the line where such is provided. In this way the score is made by noting the siding into which the engine or the like is allowed to pass by the player neglecting to operate any particular point, or if the engine successfully arrives at the final destination the larger score is made. Or, in the arrangement of the track shown, the starting point being at the trigger 15, by suitably closing the track points the engine may be diverted back to the starting point, and so returned again to the circuit of the track, an expert operator in this way being enabled to keep the engine running continuously round the track.

Hornby's Improved Toy or Game.

A scoring device 18 may be provided to count the number of times the engine or the like has been caused to circuit the track, this scoring device consisting of a toothed wheel 18 mounted beneath a slot 18^a in the plate, in such manner, that only one tooth of the wheel 18 projects above the track, such projecting
5 tooth being caught as the engine passes this point, and the wheel turned through an angular distance corresponding to the pitch of the teeth. These teeth are numbered and the number of times the engine encircles the track is thus automatically recorded. To further increase the difficulty of the game a projection 19, mounted on a lever 20 pivoted at 20^a and provided with a spring
10 controlled push button 20^b, may be provided, normally projecting in the track in such position as to wreck the train or the like, such projection, however being cleared from the track by depressing the button 20^b.

Instead of an engine moving by its power—such as a clockwork train—a rolling ball may be utilised, corresponding modifications being effected in the track,
15 the base plate being in such a case tilted by the operator to cause the ball to be propelled along the track by its own rolling action.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

20 1. An improved toy or game comprising a set of rails having a series of branch sidings normally open and provided with movable points operated by hand levers and adapted to close the entrance to the sidings and a moving body such as an engine or the like travelling on the rails, substantially as described.

25 2. The improved toy, or game constructed arranged and operated, substantially as described and shown in the accompanying drawings.

Dated this 15th day of May, 1911.

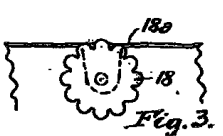
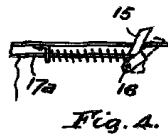
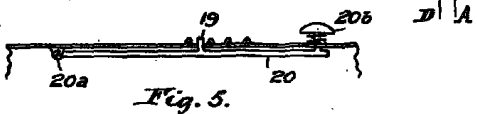
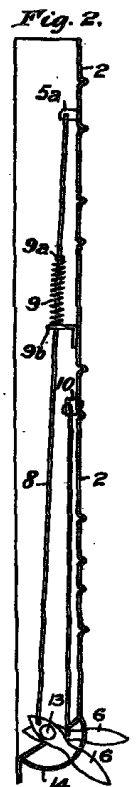
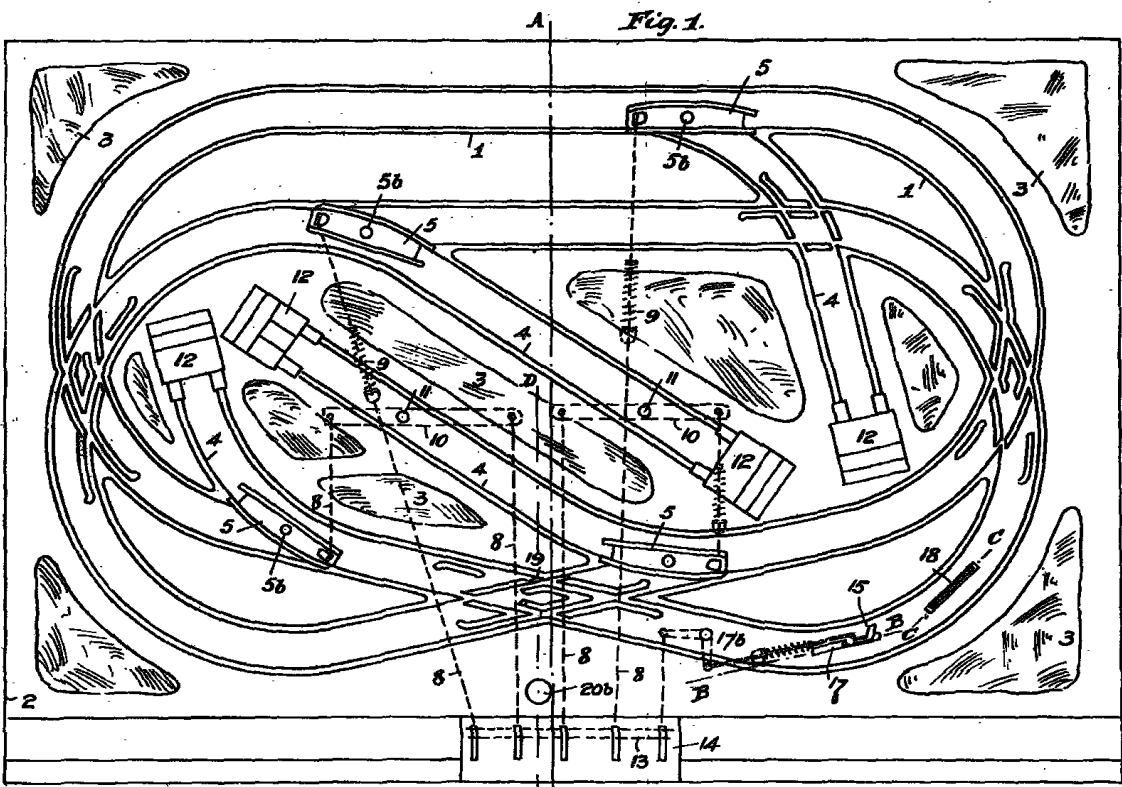
For the Applicant,

A. J. DAVIES,

Patent Agent by Examination,
37, Moorfields, Liverpool.

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[This Drawing is a reproduction of the Original on a reduced scale.]



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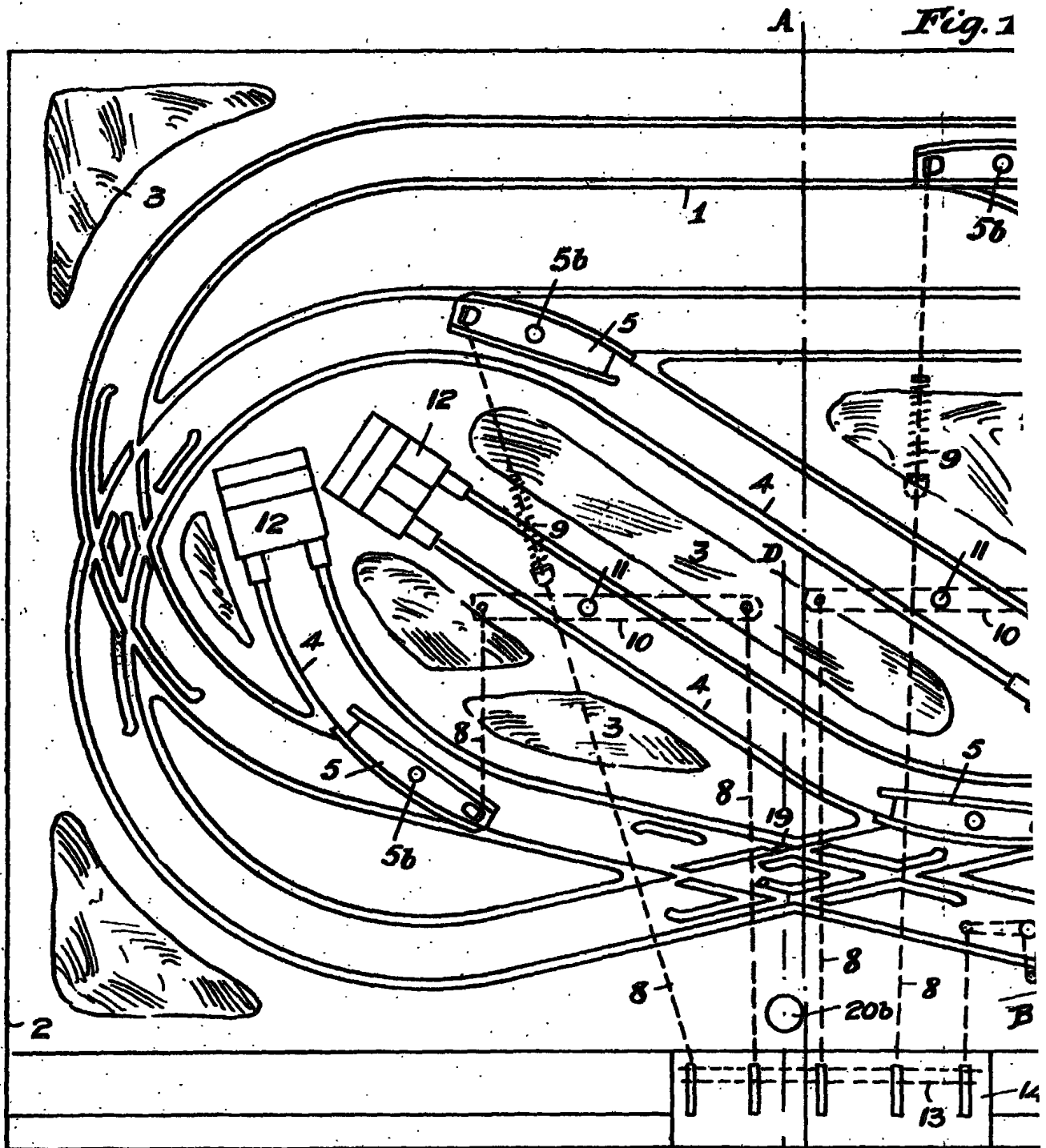


Fig. 5.

1.

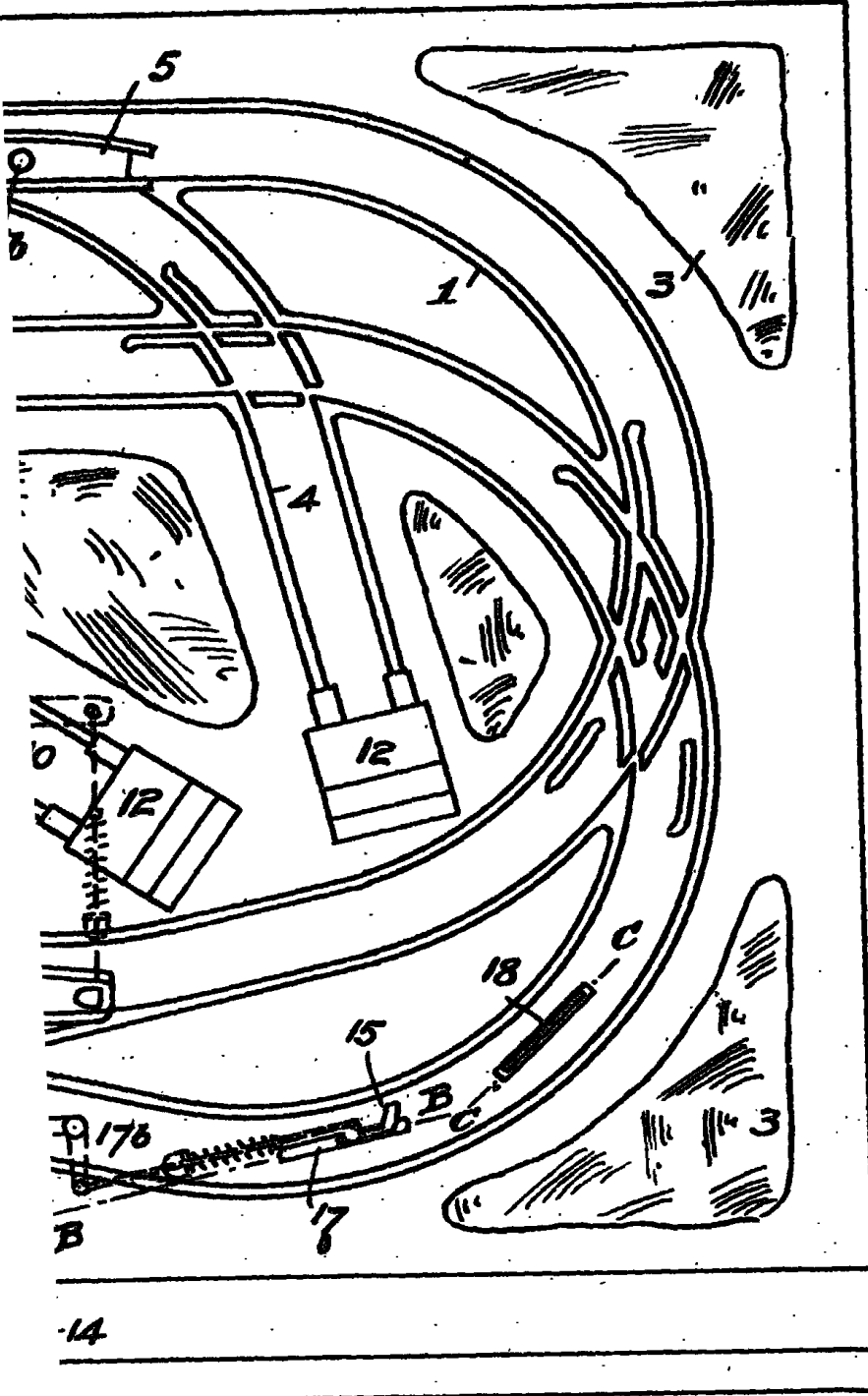


Fig. 2.

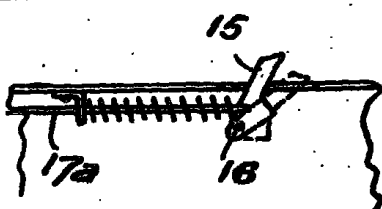
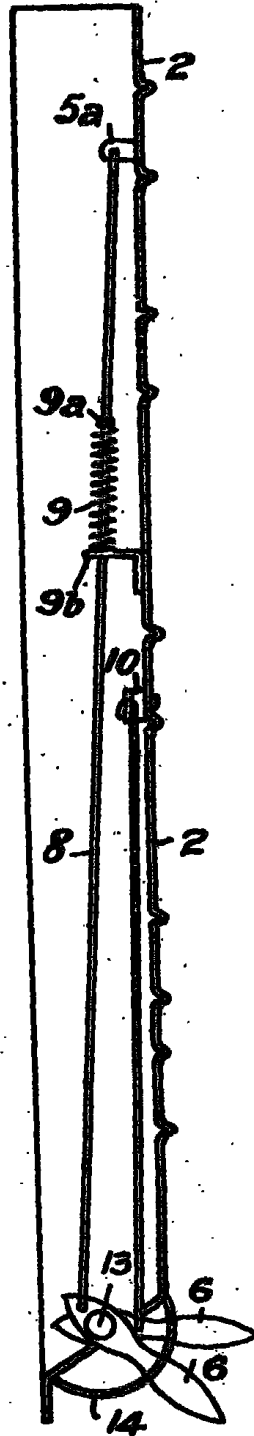


Fig. 4.

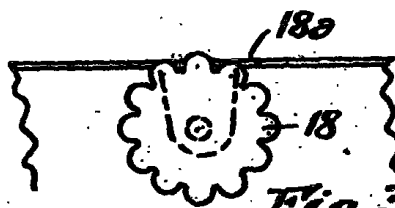


Fig. 3.

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