

No. 688,339.

Patented Dec. 10, 1901.

J. M. RODGERS.

PUZZLE.

(Application filed Dec. 11, 1900.)

(No Model.)

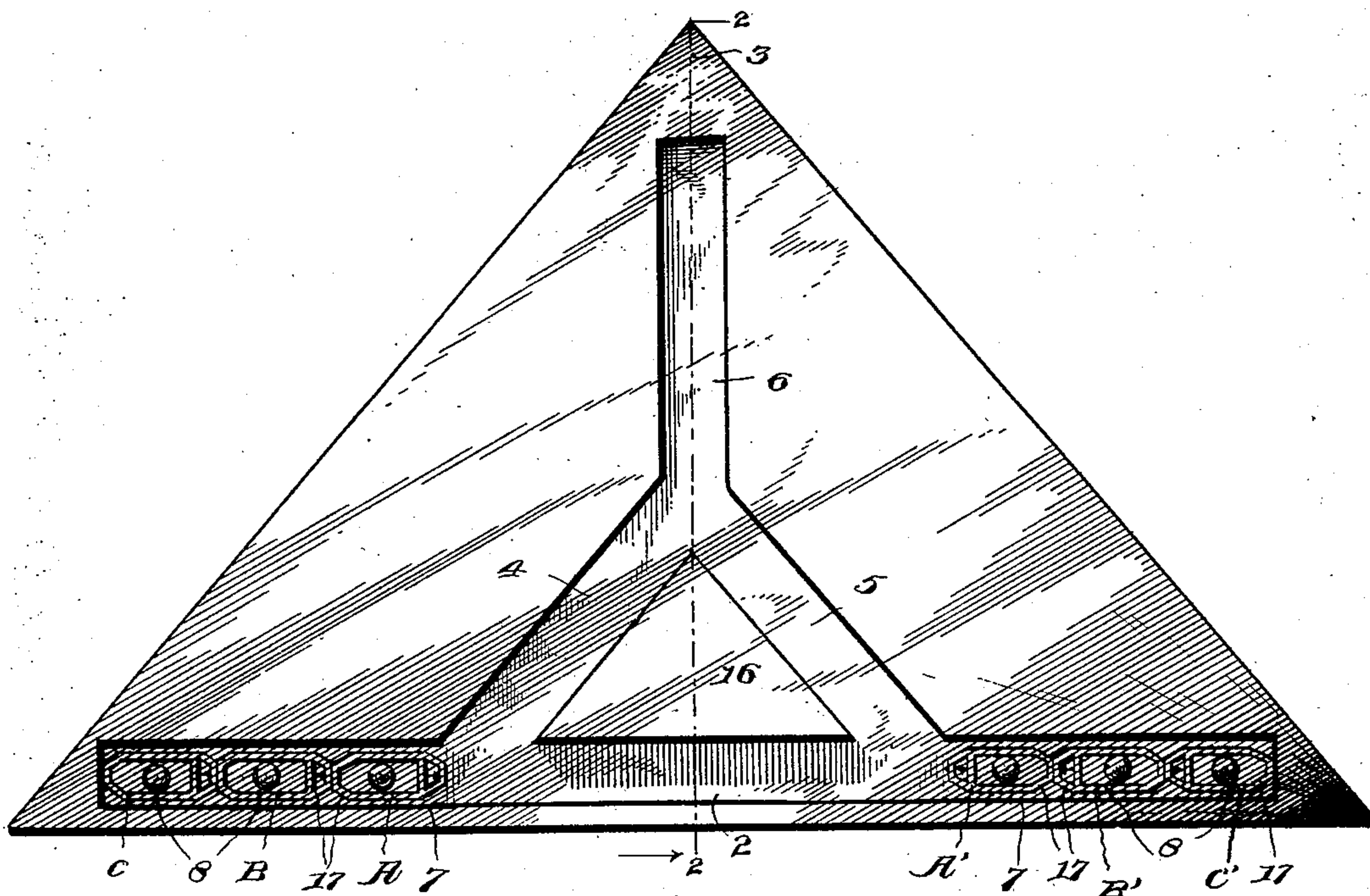


Fig. 1.

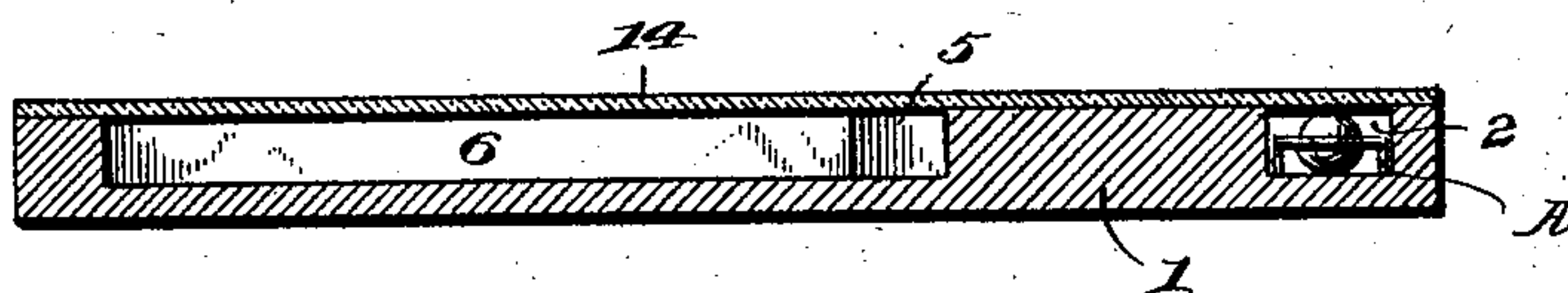


Fig. 2.

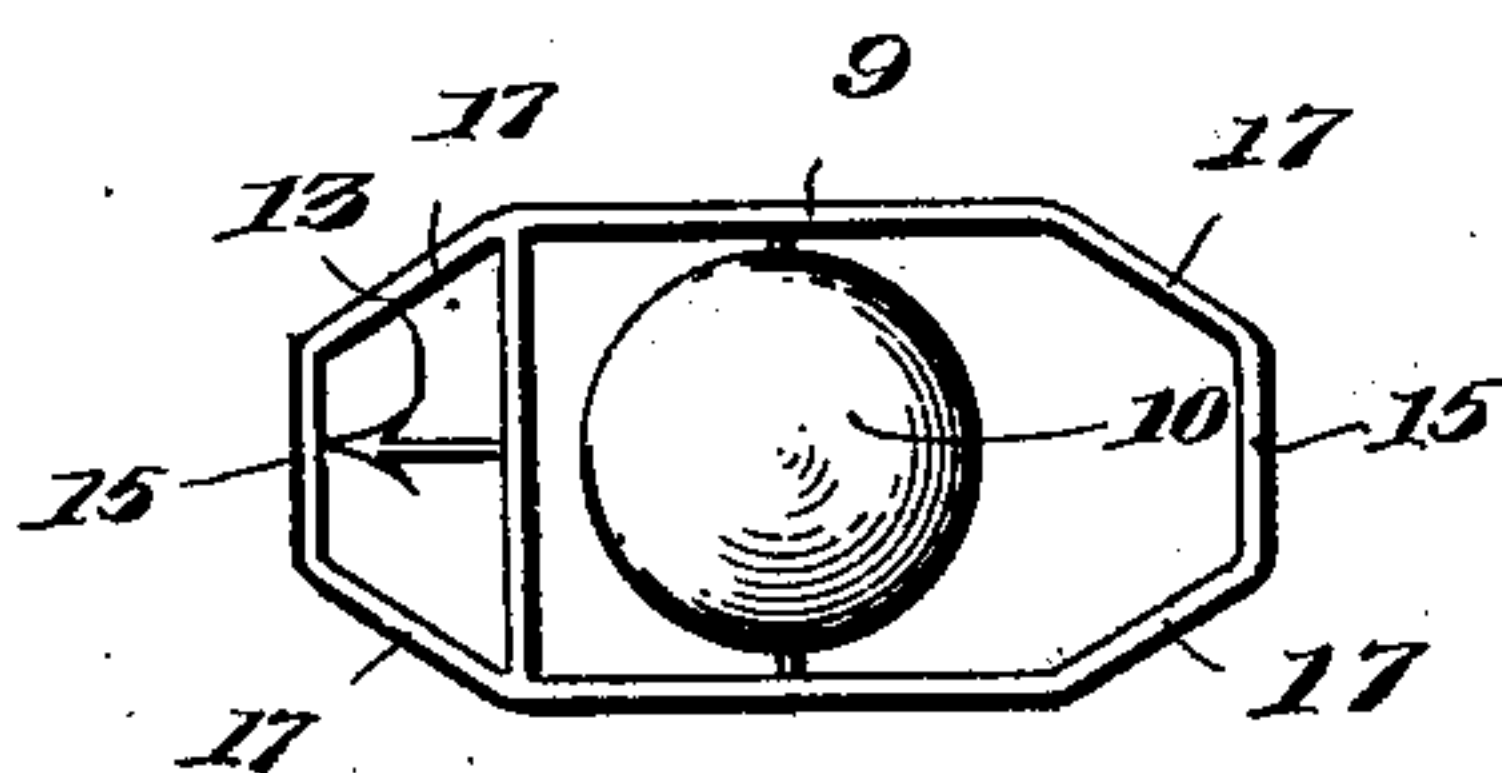


Fig. 3.

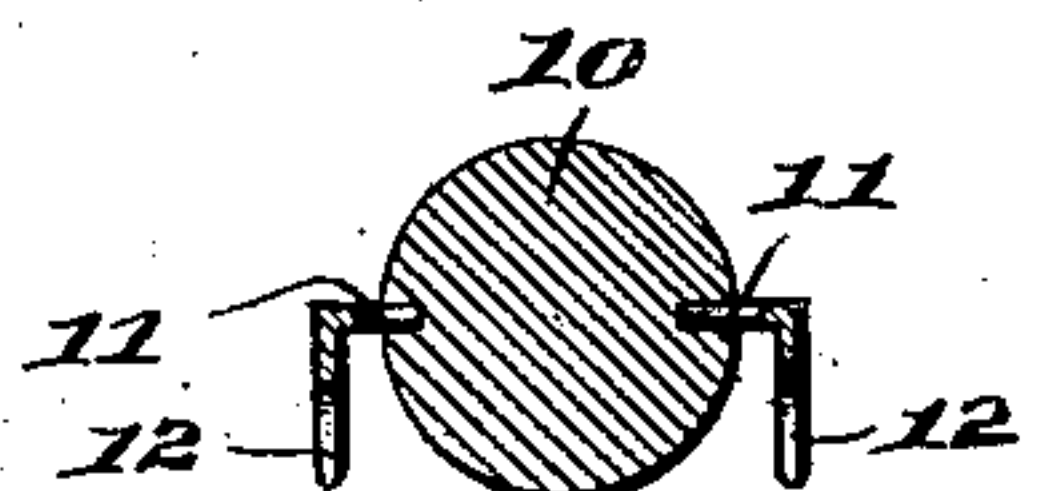


Fig. 4.

Witnesses

Los Angeles

H. J. Shepard.

J. M. Rodgers Inventor

by C. A. Snow & Co

Attorneys

UNITED STATES PATENT OFFICE.

JOHN M. RODGERS, OF ROANOKE, VIRGINIA.

PUZZLE.

SPECIFICATION forming part of Letters Patent No. 688,339, dated December 10, 1901.

Application filed December 11, 1900. Serial No. 39,519. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. RODGERS, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented a new and useful Puzzle, of which the following is a specification.

This invention relates to puzzles, and more particularly to what may be termed "railroad-puzzles," in which are employed a track and objects movable thereon to represent locomotives and cars.

In general the object of the invention is to provide amusement through the solution or attempted solution of a railroad problem, in this particular instance to pass two approaching trains by means of a Y-siding and to maintain the trains in their original directions. It is furthermore designed to provide for moving the trains by the tilting of the body of the device, to prevent accidental displacement of the trains when the device is at rest as well as during the solution of the puzzle, and finally to maintain the trains in complete view of the manipulator.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a plan view of the present puzzle. Fig. 2 is a sectional view thereof, taken on the line 2 2 of Fig. 1. Fig. 3 is a detail top plan view of one of the movable objects constituting the trains. Fig. 4 is a transverse sectional view thereof.

Like characters of reference designate corresponding parts in all of the figures of the drawings.

Referring to the drawings, 1 designates the body of the puzzle, which is formed from a block of wood, so as to be light and durable, and is preferably triangular in shape, so as to facilitate the manipulation thereof in the solution of the puzzle. In what is normally the upper face of the block there is provided

a straight groove 2, which is located at or adjacent to one edge of the block, which for convenience will be termed the "base" thereof, said groove terminating at opposite ends adjacent to the respective ends of the base, so as to give the main track the greatest possible length.

Located between the main track or groove and the head 3 of the block or board there is provided a Y-shaped siding. This siding consists of the opposite branch grooves 4 and 5, which intersect the main groove at opposite sides of its middle and converge therefrom toward the head of the block or board. From the point of convergence of the branch grooves there is another straight groove 6, extending toward the head of the block or board and forming the tail of the Y. The lengths of the tail portion of the Y and the opposite end portions of the main track between the inner ends of the respective branch tracks 4 and 5 and the adjacent terminals of the main track are equal and correspond to the length of a single train, so that but one train can occupy one of these portions of the track at a time.

It is preferable to have the block or board in the form of an isosceles triangle, with the main track extending parallel with and adjacent to the base thereof and the tail of the Y located in the median line between the base of the block and the vertex of the opposite angle, so as to have the parts of the track compactly and neatly arranged for convenience in manipulating the block or body, the three reduced angular ends of the latter forming convenient handles.

Each train comprises a locomotive 7 and one or more cars 8, said cars normally occupying the respective end portions of the main track, whereby the locomotives are at the inner ends of the respective branches of the Y, so as to be conveniently run into the latter by the manipulation of the block or body. Instead of a steam-train the traveling objects may designate or represent cable or electric trains, as may be desired.

As hereinbefore set forth, the object of the puzzle is to interchange the trains from one end to the opposite end of the main track, this transposition being accomplished by tilting the block or body, so as to move the trains

along the grooves or tracks constituting the main and Y tracks. It is also intended to have the trains headed in the same directions as originally when they have been transposed.

5 It will be remembered that the respective end portions of the main track and the tail of the Y correspond in length to that of each train, whereby considerable difficulty will be encountered in endeavoring to leave the trains
10 in their original directions.

It will of course be understood that the two trains should be distinguished—as, for instance, by shape or color—and the head of the train should be distinguished from the rear
15 end thereof in some suitable manner, so as to guide the manipulator in the solution of the puzzle.

One embodiment of car or movable object has been shown in Figs. 3 and 4 and comprises a substantially rectangular frame 9,
20 having a rotary or wheeled support in the form of a ball or sphere 10 journaled between the sides of the frame and projecting equally above and below the skeleton frame. As
25 shown in Fig. 4, this ball is mounted upon the opposite journals or studs 11, projecting inwardly from opposite sides of the frame and received within suitable sockets or recesses in the ball; but other methods of mounting the ball may be resorted to. At the four
30 corners of the frame there are the pendent legs 12, which terminate short of the bottom of the groove in the block or board and are designed to prevent the frame from tilting downwardly and wedging against the bottom
35 or back of the groove. The front end of the frame is indicated by means of an arrow 13, so that the forward direction of the train or car may be readily seen at a glance. It is
40 preferable to have wheeled movable objects, so as to obviate friction as much as possible; but slidable objects without antifriction devices may be employed, although they will not respond as quickly to the tilting of the
45 block or board.

The upper face of the block or board is transparently covered, preferably by means of a glass plate 14, as best shown in Fig. 2 of the drawings, said plate coinciding with the
50 top of the block and closing the grooves, so as to prevent loss of the movable objects when the puzzle is at rest and also during the tilting thereof and at the same time exposing said objects to view, so as to guide the manipulator in the solution of the puzzle.
55

It is desired to call special attention to the opposite blunt ends 15 of the movable objects or cars, which are designed to strike against the sharp corners of the triangular obstruction 16, which separates the main groove from the branch grooves 4 and 5, thereby stopping or deflecting the movable object and increasing the difficulties in the solution of the puzzle. Also the four corner edges are beveled,
60 as indicated at 17, so as to prevent the ob-

ject from binding against the sides of the grooves, and thereby facilitating the movement thereof.

A further condition governing the solution of the puzzle is that when the groups of movable objects have been moved to the opposite
70 ends of the tracks the respective objects must maintain their original relation with respect to the other objects of the same group. In order that this condition may be complied
75 with, the members of each group are distinguishably designated and arranged in a predetermined relation—as, for instance, one group may be colored red, white, and blue in the order named from the front of the group,
80 whereby it is an easy matter to determine whether or not the members are arranged in their original relation when they have been moved to the opposite end of the track. As
85 shown in Fig. 1 of the drawings, the members of the left-hand group have been distinguishably designated by the letters A, B, and C, while the characters A', B', and C' have been employed to distinguish the members of the other group. When the puzzle has been
90 solved, the members A, B, and C should occupy the original positions of the members A', B', and C', and vice versa. It will be understood that both groups should have the
95 same number of members; but the number of members for the respective groups may be varied as may be desired. Also the members may be distinguished by color, shape, or by placing some distinguishing character upon
100 each member, as indicated in Fig. 1 of the drawings. In such instances where balls may be used as the movable objects it is of course impossible to indicate the front of each member, so that the direction limitation or condition is then omitted, but the relative arrangement must be preserved.
105

What is claimed is—

1. A puzzle, comprising a block or body, having one or more grooves therein, and one or more movable objects traveling therein,
110 each object comprising a skeleton frame, having opposite legs, and a rotatable support mounted within the frame and traveling upon the back of the groove.

2. A puzzle, comprising a block or body,
115 having one or more grooves formed therein, and one or more objects traveling in the groove, each object comprising a substantially rectangular frame, having its corners beveled and forming opposite blunt ends, and
120 a rotatable support mounted within the frame and traveling upon the back of the groove.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN M. RODGERS.

Witnesses:

LAWRENCE S. DAVIS,
W. S. M. CLANATIAN.