United States Patent [19]

Ramirez

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[54] **ARTICLE TRANSPORTING GAME APPARATUS**

[75] Inventor: **Carlos M. Ramirez,** Brooklyn, N.Y.

[73] Assignee: **Steven Manufacturing Company,** Hermann, Mo.

[22] Filed: **April 14, 1971**

[21] Appl. No.: **133,808**

[52] **U.S. Cl.** .....**273/86 R,** 273/110, 46/40

[51] **Int. Cl.** **A63f 9/14**

[58] **Field of Search** .....273/86 R, 85 C, 85 D, 85 E, 273/110; 40/106.25; 46/40, 42

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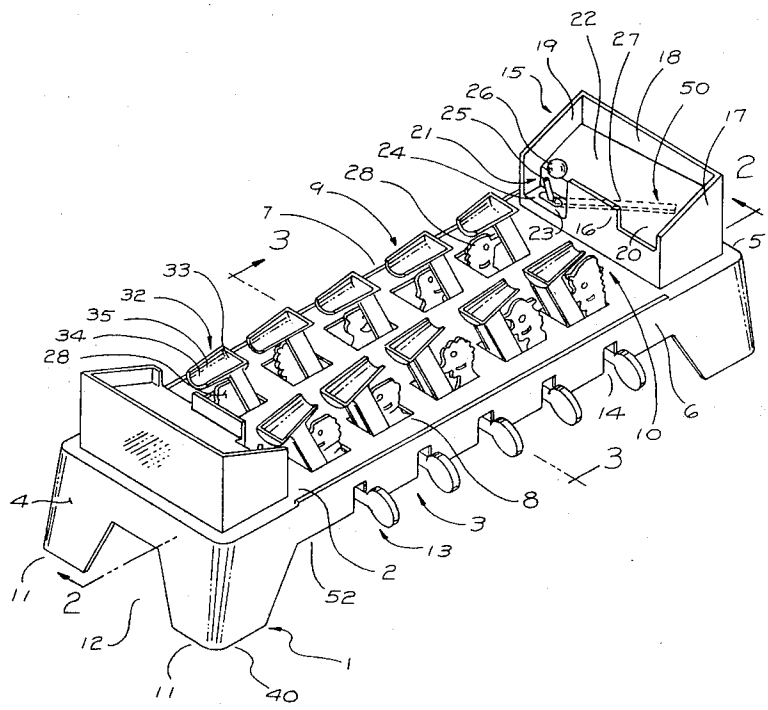
Primary Examiner—Anton O. Oechsle

Attorney—Polster & Polster

[57] **ABSTRACT**

A game has two rows of scoop-shaped buckets on arms pivotally mounted on a base below the buckets. Each of the buckets may be rotated manually independently of the others. The arrangement of the bucket in each row and their construction allow an article to be passed to the next adjoining bucket in the row, or, in the case of the last bucket in the row, to a hopper; and the buckets are disposed oppositely in the two rows. A hopper at each end of the base plate receives articles from the last bucket of one row and feeds them to the first bucket of the oppositely directed row.

13 Claims, 3 Drawing Figures



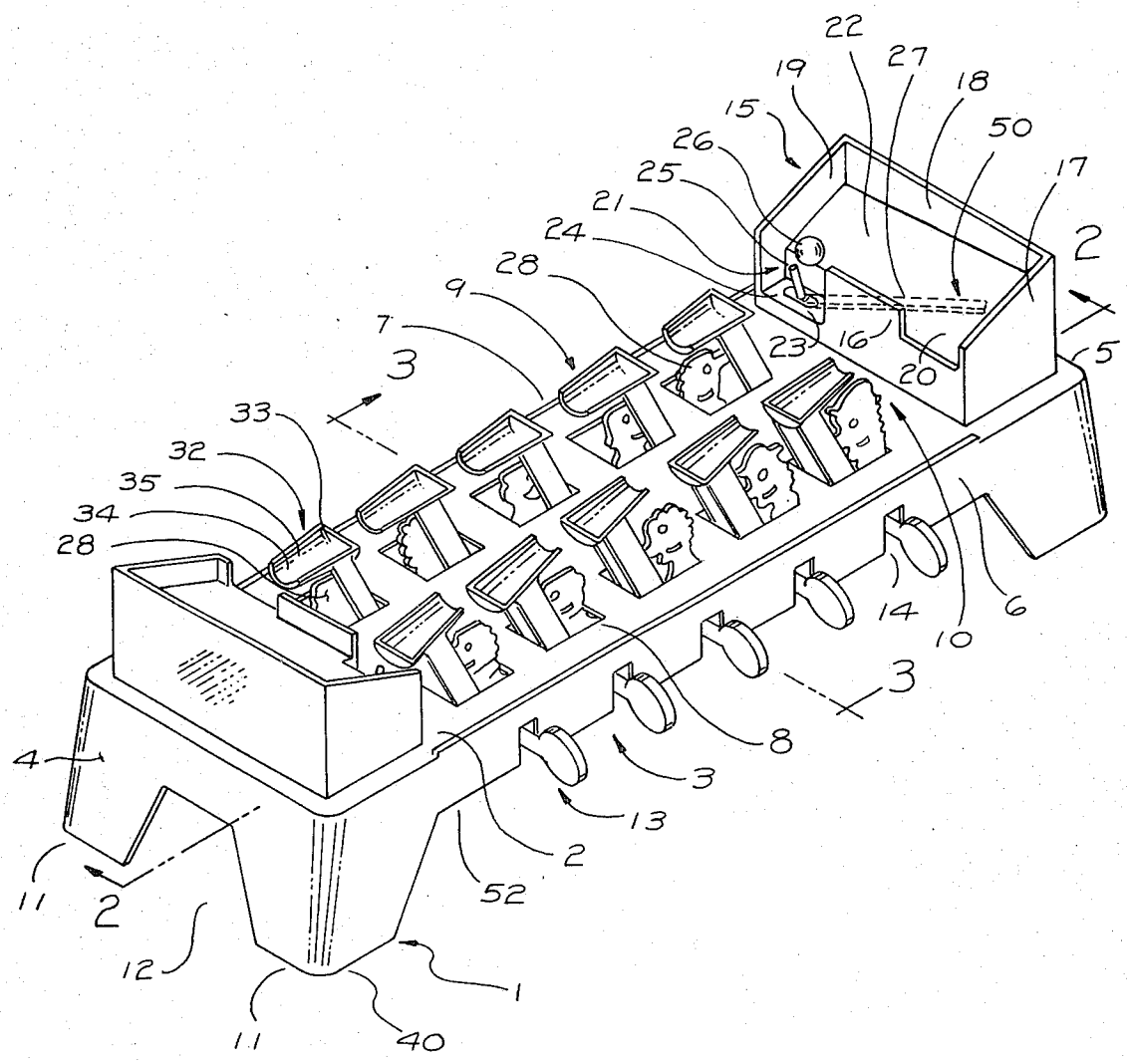


Fig-1-

INVENTOR
CARLOS M. RAMIREZ

By

ATTORNEYS

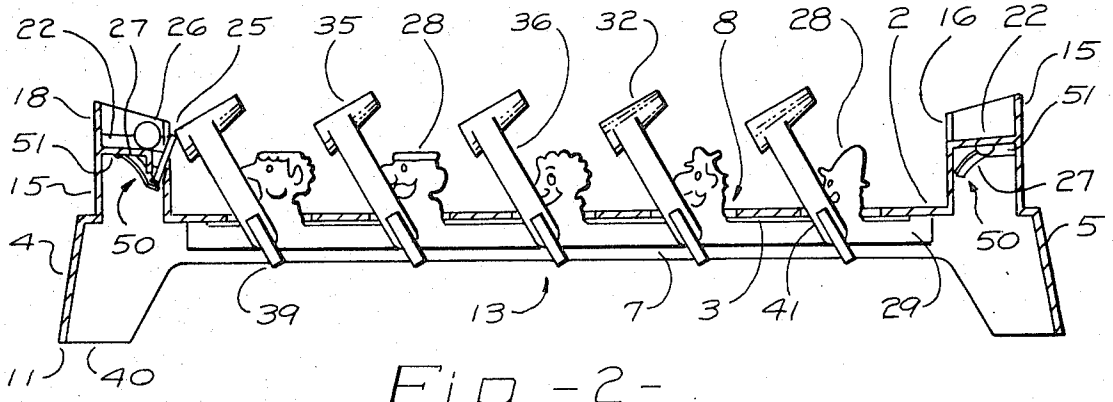


Fig -2-

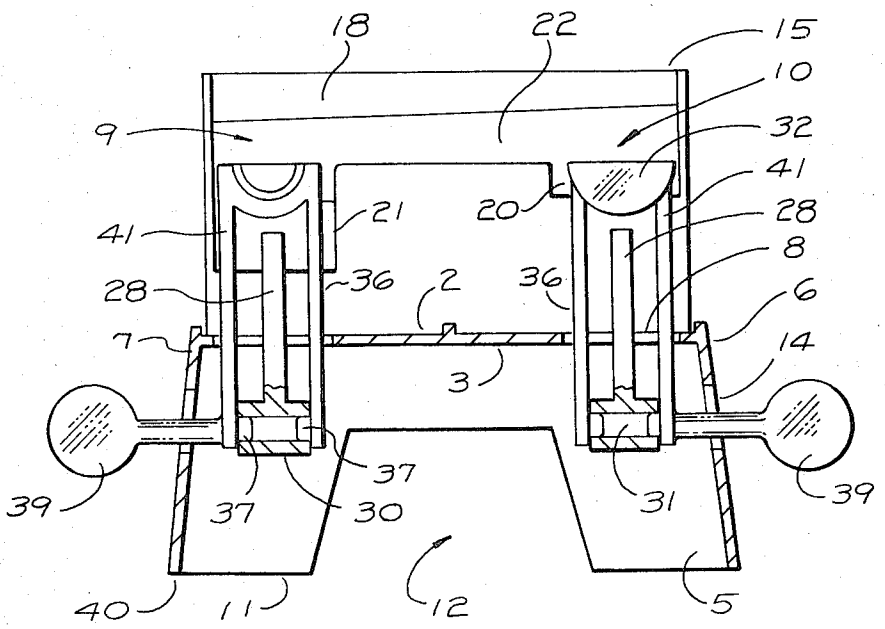


Fig - 3

INVENTOR
CARLOS M. RAMIREZ
By
ATTORNEYS

ARTICLE TRANSPORTING GAME APPARATUS

BACKGROUND OF THE INVENTION

This invention relates to games which are fascinating for children, and in particular, to games where physical coordination and timing are important.

There are few existing appealing games, teaching a competitive spirit, which require manual dexterity and coordination. Nor are many games so interest-sustaining that they enable children to amuse themselves even without other participants in the game. The game toy of this invention may be played alone or with others and is entertaining in either situation.

Toy designers usually attempt to design simple devices for younger children. However, toys that challenge a child yet provide simple design features are not derived easily. The game toy of this invention is characterized by its simple construction, and its inherent challenge is a derivative of that construction.

One of the objects of this invention is to provide a low cost, easy to manufacture, children's game which is both entertaining and educational.

Another object of this invention is to provide a children's game that requires manual dexterity and coordination in use.

Yet another object of this invention is to provide a children's game which can be played by more than one person and fosters a spirit of competition among the players.

Other objects will become apparent to those skilled in the art in view of the following description and accompanying drawings.

SUMMARY OF THE INVENTION

In accordance with this invention, generally stated, a game toy has a base with parallel rows of scoop-like buckets and arms pivotally mounted for movement, provided with handles for manipulation and arranged so that a marble or the like can be passed from one bucket to another down the row to a storage hopper at the end of the row.

The preferred embodiment utilizes two rows of oppositely disposed caricature-type figures and the arms which support the bucket appear to be those of the figures. The hopper at each end of the rows has an entrance and an exit connected by an inclined plane surface so that the marble will roll from the end of one row to the beginning of the other. Each exit has a stop mechanism which is releasable intentionally by the manual movement of the first bucket in the row, and is so arranged that the released ball rolls into the bucket.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings,

FIG. 1 is a view in perspective of the toy of this invention;

FIG. 2 is a sectional view taken along the line 2—2 of FIG. 1; and

FIG. 3 is an enlarged sectional view taken along the line 3—3 of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, reference numeral 1 indicates a base for the game toy of this invention. Base 1 has a rectangular top 2, a bottom 3, ends 4 and 5, and sides 6 and 7. Top 2 has a plurality of spaced rectangular openings 8 in it. Openings 8 are arranged longitudinally along top 2 in two parallel rows 9 and 10.

Ends 4 and 5 are identical and are canted slightly from a supporting edge 11 to their abutment and integral attachment with top 2. Each end 4 and 5 has a decorative trapezoidal opening 12 in it. The construction of ends 4 and 5 is conventional and is a matter of design choice. The ends may rise perpendicularly from edge 11 and various other shapes may be cut or molded in their surface areas.

Sides 6 and 7 also are identical and are cut away from a supporting edge 40, coextensive with edge 11, to form an elongated trapezoidal opening 13. The cut away design of the ends and sides gives base 1 the appearance of having four frustrum shaped legs, one at each corner of rectangular top 2, extending downwardly and outwardly from bottom 3. Sides 6 and 7 also have in them a plurality of slots 14, extending through the thickness of the sides. Slots 14 are closed at their upper end and extend downwardly from a point near top 2 and open through a lower edge 52 of side 6, giving edge 52 of sides 6 and 7 a scalloped effect. Each rectangular opening 8 in top 2 has a corresponding slot 14 in either side 6 or side 7, positioned lengthwise of the top, approximately at the center of the long edge of opening 8.

A hopper 15 is mounted at each end of top 2. Hopper 15 is a hollow body having side walls 16, 17, 18 and 19 which are attached to top 2 along their lower edges by adhesive, fusing, or any other conventional means. Side 16, the inboard facing wall of hopper 15 has an entrance 20 and an exit 21 in it. A top wall 22, inclined in two directions from the horizontal, is positioned below the upper ends of the side walls so that the side walls form a retainer about its perimeter. Top wall 22 slops downwardly toward wall 16 from wall 18, and from wall 17 toward wall 19, producing a gradient from entrance 20 to exit 21.

Exit 21 has a step 24 connecting wall 16 to top wall 22, and the horizontal portion of step 24 has an opening 23 in it, centered approximately intermediate the longitudinal length of exit 21.

A stop 50 is L-shaped in side elevation, having a short leg 25 and a long leg 27. Long leg 27 of stop 50 is attached at its end opposite the short leg 25 to an underside surface 51 of wall 22 by any convenient method; adhesive, for example, works well. Leg 25 extends through opening 23 and blocks exit 21 to a marble 26. The length and resilience of leg 27 is chosen so that stop 50 possesses sufficient natural bias to permit leg 25 to move spring fashion through opening 23 in response to external pressure applied to leg 25.

A series of caricatures 28, in the preferred embodiment being human representations, are formed integrally with a rack 29, as may best be seen in FIG. 2. Rack 29 is attached to bottom 3 by adhesive or other convenient method. The height of caricatures 28 is chosen so that they extend from and through rectangular openings 8 and are visible above top 2 after rack 29 is attached to bottom 3.

Positioned beneath each caricature 28 are bosses 30, which are formed integrally with rack 29. Bosses 30 are open ended, and cylindrically shaped, with a longitudinal opening 31 therethrough.

Each caricature 28 has a bucket 32 associated with it. Preferably, bucket 32 is open topped, has a closed end 33 and an open end 34 connected by a sloping side wall 35. Two spaced, parallel arms 36 and 41 are integrally formed with bucket 32 at the top ends, respectively, of each arm. A lower end of each arm 36 and 41 has an inwardly directed pintle 37 made integral with it. The lower end of arm 41 has a handle 39, extending outwardly in alignment with but oppositely from pintle 37, at right angles to arm 41. Pintles 37 face each other inwardly. In the preferred embodiment, the arm and bucket arrangement are plastic. The natural resilience of that material enables the arms to be spread sufficiently to engage pintles 37 in opening 31 of boss 30, clevis fashion. The arms are spaced to clear the caricature 28 with which it is associated. In making the game, the pintles can be snapped into the boss and the rack thereafter moved up into position and glued or otherwise secured. The pintles are of such a length that the margins of the openings 8 prevent their coming out of the boss after the rack is secured. The engagement of pintles 37 in boss 31 forms a hinge mounting for bucket 32 and allows the bucket to move by rotation of handle 39. Bucket pivot motion is limited by the length of openings 8 in top 2. The pivot motion degree of arc is variable among various board designs. Since marble 26 is passed between buckets, however, that degree of arc must be sufficient to enable successive and consecutive passing.

The hoppers 15 and buckets are disposed oppositely along rows 9 and 10. In this placement, one bucket row feeds hopper 15 through entrance 20 while the other row receives marbles 26 from exit 21.

The game is simple to understand and easy to operate, making it especially appealing to children, young and old alike. One or more distinguishable marbles 26 are placed in each hopper 15. The first bucket in each row is loaded by rotating the closed end 33 of bucket 32 against leg 25 of stop 50. Pressure directed through the bucket against leg 25 forces leg 25 downwardly below a riser portion 70 of step 24 and allows marble 26 to enter the first bucket. The marble is passed successively from bucket to bucket through use of handle 39 for each bucket. Rotation of the last bucket in the row passes marble 26 through entrance 20 of the oppositely placed hopper 15. The gradient of wall 22 carries marble 26 toward exit 21 where it may be loaded by the first bucket of the oppositely directed row.

Various game combinations are possible. Where a number of distinguishable marbles 26 are placed in each hopper and two players are available, the players may race to place more marbles in the opposite hopper than the opponent passes to his hopper. Or, each player may race using a single marble in each direction. Similarly, a single marble may be passed against time, the player having possession of the marble at the time limit losing the point. Game variations also can be made for one player, and younger children enjoy the mere passing of a single marble from row to row.

Numerous variations in the toy of this invention, within the scope of the appended claims, will occur to those skilled in the art in light of the foregoing description. Thus, the shape, character or number of design representations may be changed or they may be eliminated entirely. When eliminated entirely, the base may be solid with mountings for the arms integrally contained along top 2. The bucket or hopper design may vary. For example, the hopper may be partitioned to prevent intermingling of marbles 26, particularly where the game is played with more than one such marble. Objects other than marbles may be utilized for passing. The material used in the construction of the game toy may be varied. The preferred embodiment is plastic, but thin sheet metal or a combination of plastic and metal parts work well. Other structural design changes may be made. The legs can be solid or extended vertically downwardly from bottom 3 rather than utilizing the canted design of the preferred embodiment, for example. These variations are merely illustrative.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A game toy wherein the object is to pass an article between two points on a game board comprising:

a base;

means for transporting an article between two spaced points on said base, said transporting means being attached to said base and arranged in at least two parallel but oppositely directed rows, said transporting means comprising a plurality of buckets on arms pivotally mounted and attached to said base at a distance from said buckets to provide bucket translation in an arcuate path; and

means for receiving, storing and feeding an article positionally arranged and attached to said base at each end of said parallel rows so as to receive articles from the first row and feed articles to a second but oppositely directed row.

2. The game toy of claim 1 wherein each said receiving, storing and feeding means comprises a four sided box closed at its lower end by attachment with said base, having one side wall which defines both receive and feed openings, said openings being interconnected by an inclined plane which closes said box at its open end below an upper extension of said side walls, said opening defining side wall meeting said inclined plane at said feed opening at a step, said feed opening being closed by movable stop means extending through the horizontal ledge of said step.

3. The game toy of claim 4 wherein said movable stop means comprises an L-shaped arm having a short leg forming the stop position to extend through said horizontal step ledge and a long leg attached to a lower surface of said inclined plane, said stop being biased to act spring fashion in response to forces applied to said short leg.

4. The game toy of claim 3 wherein said L-shaped arm stop is biased naturally.

5. A game toy wherein the object is to pass an article between two points on a game board comprising:

a base with an upper and a lower surface having a plurality of openings from and through said upper and lower surfaces, with said openings arranged in at least two parallel rows;

means for transporting an article between two spaced points on said base, said transporting means being attached to said lower surface of said base and extending upwardly therefrom, through respective ones of said openings, and directed oppositely in successive rows, said transporting

means comprising a plurality of buckets on arms pivotally mounted and attached to said lower surface at a distance from said buckets to provide bucket translation in an arcuate path; and

means for receiving, storing and feeding an article positionally arranged and attached to said upper base surface at each end of said parallel rows so as to receive articles from a first row and feed articles to a second but oppositely directed row.

6. The game toy of claim 5 wherein said receiving, storing and feeding means comprises a four sided box closed at its lower end by attachment with said base, having one side wall which defines both receive and feed openings, said openings being interconnected by an inclined plane which closes said box at its open end below an upper extension of said side walls, said opening defining side wall meeting said inclined plane at said feed opening at a step, said feed opening being closed by a movable stop means extending through the horizontal ledge of said step.

7. The game toy of claim 6 wherein said movable stop means comprises an L-shaped arm having a short leg forming the stop positioned to extend through said horizontal step ledge and a long leg attached to a lower surface of said inclined plane, said stop being biased to act spring fashion in response to forces applied to said short leg.

8. A game toy comprising:

a base with an upper and a lower surface having a plurality of openings from and through said upper and said lower surfaces

transporting means attached to said base for transporting an article between two spaced points on said base, said transporting means comprising a plurality of article receivers each mounted on at least one arm, each of said arms extending upwardly from said base through a separate one of said openings and movable so as to provide article receiver translation in an arcuate path; and

means for feeding an article to said article receiver, said feeding means being mounted to said base and positionally arranged so that movement of at least one of said receiver and arm combinations loads said article into said one receiver from said feeding means.

9. A game toy of claim 8 wherein said openings in said base are arranged in at least two parallel rows and said transporting means is directed oppositely in successive rows.

10. The game toy of claim 9 wherein said feeding means is adapted to feed articles to a first row and receive articles from a second row.

11. The game toy of claim 10 wherein said feeding means comprises a four sided box closed at its lower end by attachment with said base, having one side wall which defines both receive and feed openings, said openings being interconnected by an inclined plane which closes said box at its open end below an upper extension of said side walls, said opening defining side wall meeting said inclined plane at said feed opening at a step, said feed opening being closed by a movable stop means extending through the horizontal ledge of said step.

12. The game toy of claim 10 wherein said movable stop means comprises an L-shaped arm having a short leg forming the stop position to extend through said horizontal step ledge and a long leg attached to a lower surface of said incline plane, said stop being biased to act spring fashion in response to forces applied to said short leg.

13. A game toy comprising:

a base;

means for transporting an article between two spaced points on said base, said transporting means including a plurality of article receivers each attached to at least one arm, each of said arms being pivotally mounted and attached to said base at a distance from said article receiver so as to provide article receiver translation in an arcuate path; and

means for feeding an article to said article receivers said feeding means being mounted to said base and positionally arranged so that movement of at least one of said article receiver and arm combinations loads said article into said one article receiver from said feeding means.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,720,412 Dated March 13, 1973

Inventor(s)

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 2, line 38, after "22" delete "slops" and insert --slopes--.

Column 4, line 47, delete "4" and insert --2--.

Signed and sealed this 10th day of July 1973.

(SEAL)
Attest:

EDWARD M.FLETCHER,JR.
Attesting Officer

Rene Tegtmeyer
Acting Commissioner of Patents

FORM PO-1050 (10-69)

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* U.S. GOVERNMENT PRINTING OFFICE : 1969 O—366-334.