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W. C. ROBINSON.

TOY.

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1,044,248.

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Fig. 1.

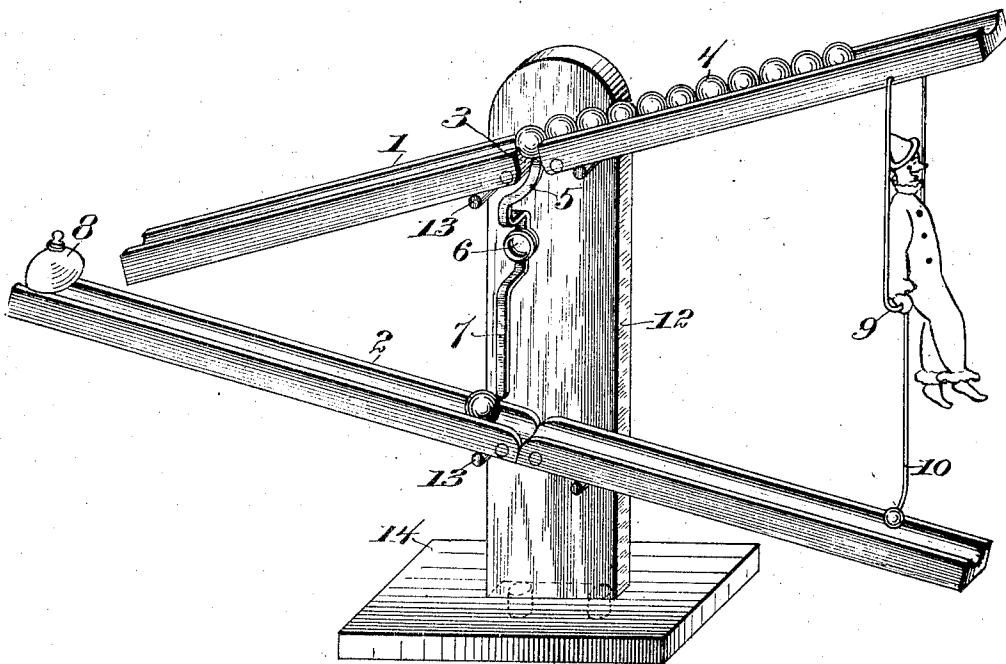
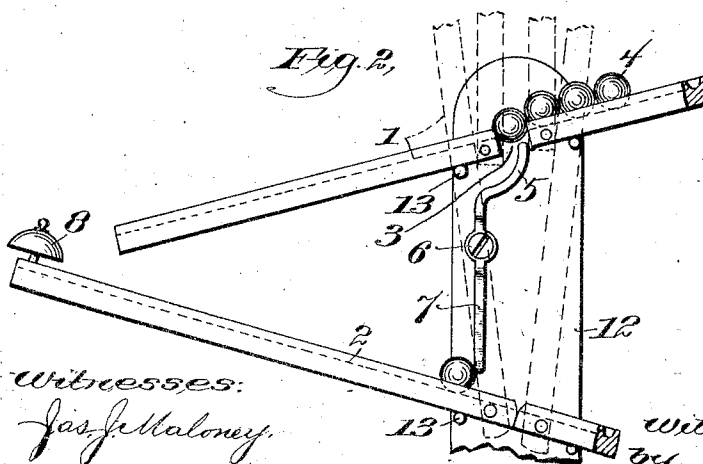


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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To all whom it may concern:

Be it known that I, WILLIAM C. ROBINSON, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Toys, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to a toy, and is embodied in a toy in which any suitable figure is adapted to be moved intermittently by a ball or roller running down an inclined chute, there being a plurality of said balls which are automatically controlled in their movement.

The toy embodying the invention comprises two or more inclined planes or chutes, the upper of which is adapted to contain a line of marbles, or other rolling devices, the said chute being provided with a recess below the plane of the chute into which a marble will drop, thus constituting a stop for the row of marbles behind. A disengaging finger is pivotally supported below the said recess and projects into the same, so that when moved on its pivot, it will push the marble out of the recess, leaving it free to travel the rest of the way down the chute, the next marble in the series then dropping into the recess and stopping those behind. A projection from the finger lies in the path of the marbles, as they travel through the lower chute, and is engaged by the marble previously released, thus causing the next marble of the line to proceed. Each marble is arranged to engage any suitable device which will actuate a figure or the like.

A further feature of the invention consists in arranging the toy so that it can be folded into a small space when not in use, and easily packed.

Figure 1 is a perspective view of a toy embodying the invention; Fig. 2 shows, in full and dotted lines, the means for folding the toy for packing.

Referring to Fig. 1, the toy is provided with two inclined chutes 1 and 2, the chute 2 being below the chute 1, and inclined in the opposite direction, so that an object dropping out of the chute 1 into the chute 2 will continue its travel in the opposite direction. Approximately at the middle of the chute 1, there is an opening or recess 3 which allows one of the line of marbles 4 contained

in the top chute to drop below the level of the others, and to be arrested by the front wall of the recess. In the construction shown, this recess is made by forming the chute 1 in two parts which are shown in the drawings as separated by a space sufficient to allow the marble to drop to the position shown. It is obvious that, so long as the front marble in the line lies in the recess, the remainder of the marbles will be held stationary, but if the said marble is pushed out, it will roll down the chute 1, and the next marble in the line will enter said recess so as to arrest those behind.

In order to render the device automatic, the device for disengaging the front marble from the recess is shown as consisting of a finger 5 which is pivotally supported at 6 and which has a tripping-finger 7, which overlies the lower chute 2, so as to be in the path of a marble in said lower chute. The marble actuating finger 5 normally rests in the position shown in Fig. 1, but if it is moved to disengage the front marble, the said marble will travel down the chute 1, while the finger 5 will drop back by gravity, so that the next marble in the line will drop into the recess. 3, the line of marbles then remaining stationary during the interval of time it takes the disengaged marble to travel to the end of the chute 1, and substantially half way down the chute 2.

If desired, the chute 2 can be provided at its upper end with a bell 8 which will be struck by the marble coming down the chute 1, and thereby rung at intervals, the said marble, after having rung the bell, traveling down the chute 2 until it reaches the projection 7 and releases another marble. The single marble thus released is adapted to operate on any suitable movable device, the toy being herein shown as a figure in the form of a clown on a trapeze, the trapeze 9 being shown as pivoted to the upper chute 1, and as having a projection 10 which is arranged to be struck by the marble as it travels down the chute 2.

The operation is started by manually operating the tripping device 5 to release one marble, after which the figure 9 will be actuated at regular intervals, the time between intervals being the time required for a marble to travel from the recess in the upper chute, to the engaging member 7.

In order that the device may be readily packed in a small space, I have shown each

of the chutes as made in two parts, the said parts being pivoted to a standard 12 and supported when in operative position by stops 13. The standard 12 is supported on a base 14 from which it can be removed; and by taking off the base and folding the opposite ends of the chutes, as shown in dotted lines in Fig. 2, the entire device can be readily packed flat in a comparatively small box.

10 What I claim is:

1. A toy comprising upper and lower chutes inclined in opposite directions and adapted to receive and guide a plurality of rolling members, the upper chute being provided with a recess whereby one of the said rolling members is arrested at a level below that of the others; a tripping finger projecting into said recess and pivoted below the upper chute and being provided with a tripping projection extending into the path of the lower chute; a movable image, or similar device, pivotally connected with the upper chute, and a projecting portion con-

nected with said image and lying in the path of the rolling device as it travels down the lower chute. 25

2. In a toy, the combination with a standard; a detachable base for said standard; upper and lower chutes connected at points near their middle with said standard, the said chutes being made in two parts having separate pivotal connections; a recess in the upper chute to arrest a rolling device therein; a tripping device pivoted to the standard below said recess and adapted to disengage a marble therefrom; and a tripping projection connected with said tripping device, and lying in the path of an object traveling down the lower chute. 30 35

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses. 40

WILLIAM C. ROBINSON.

Witnesses:

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JAS. J. MALONEY.