M. W. McINTYRE & R. P. CONNER.

AMUSEMENT DEVICE.

APPLICATION FILED MAR. 27, 1911.

1,013,843.

Patented Jan. 2, 1912.

3 SHEETS—SHEET 1.

Fig. 1

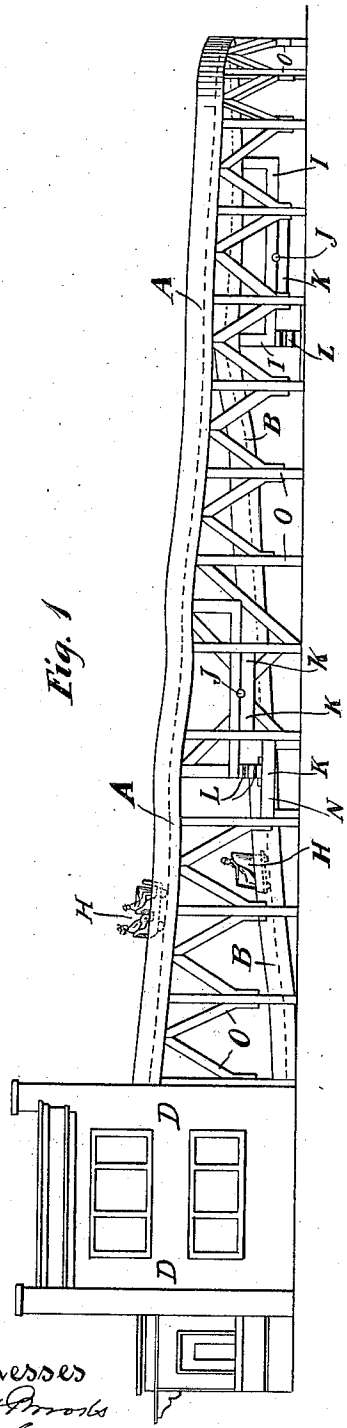
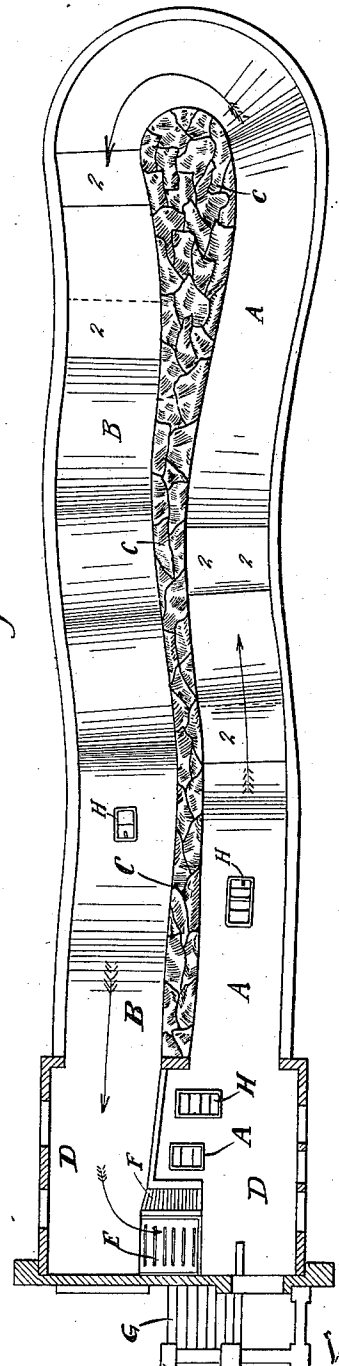


Fig. 2



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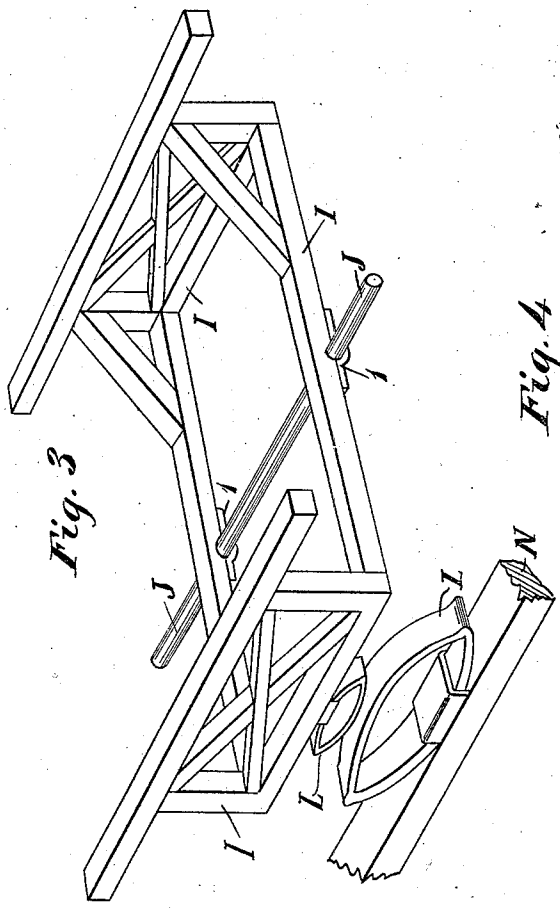

Fig. 3

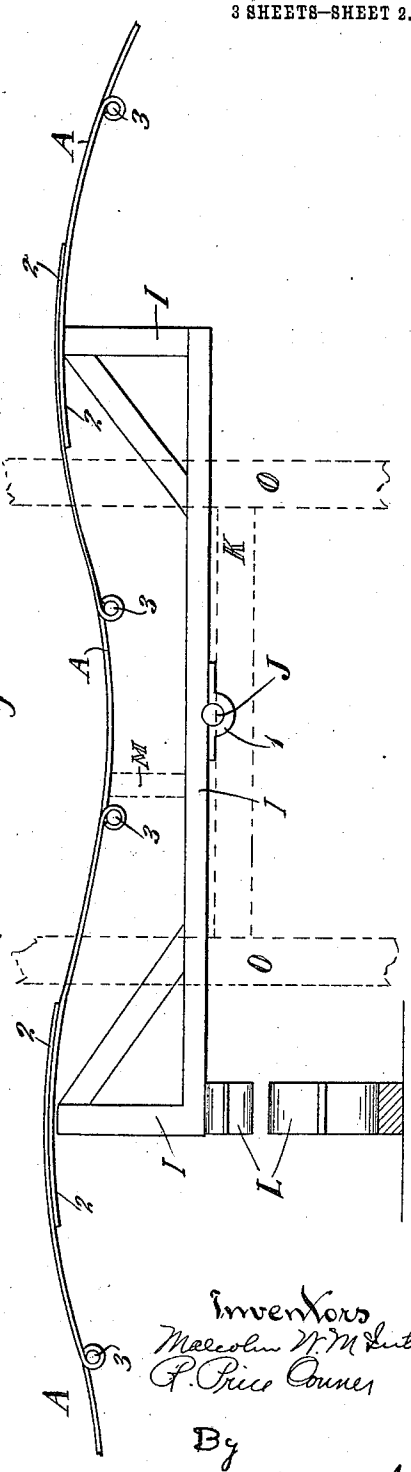

Fig. 4

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3 SHEETS—SHEET 3.

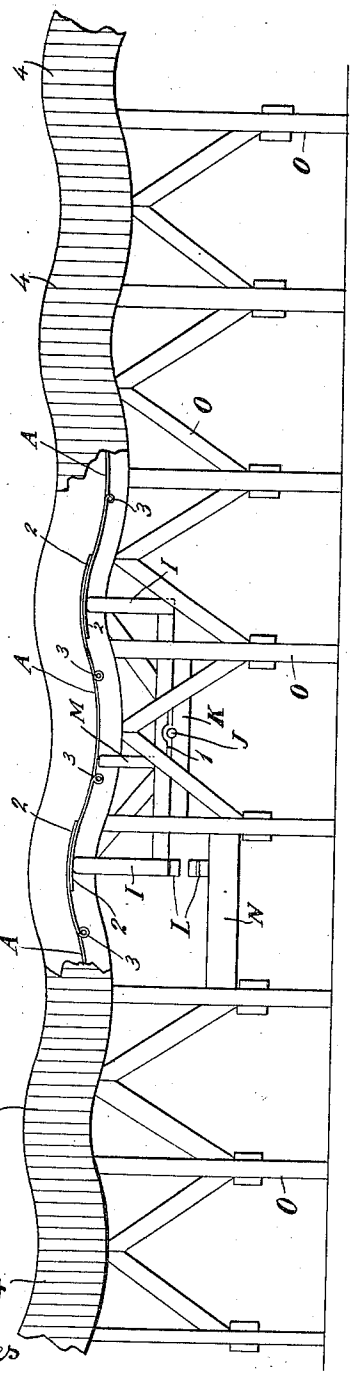

Fig. 5

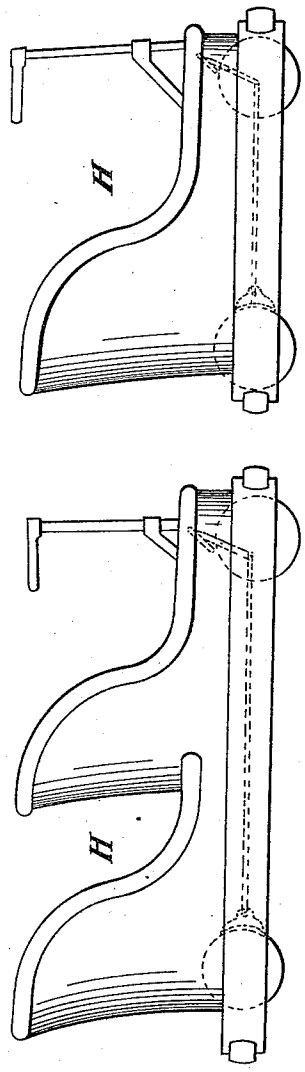

Fig. 6

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UNITED STATES PATENT OFFICE.

MALCOLM W. McINTYRE, OF CINCINNATI, OHIO, AND REES PRICE CONNER, OF COVINGTON, KENTUCKY.

AMUSEMENT DEVICE.

1,013,843. Specification of Letters Patent. Patented Jan. 2, 1912.

Application filed March 27, 1911. Serial No. 617,238.

To all whom it may concern:

Be it known that we, MALCOLM W. McINTYRE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, and REES PRICE CONNER, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented new and useful Improvements in Amusement Devices, of which the following is a specification.

This invention relates, broadly speaking, to amusement devices and more particularly to that class of such inventions known as "switchbacks".

The objects of our invention are: 1. To provide an elevated, inclined, undulating railless way having an out-going and an in-coming portion and, in plan view, U-shaped. 2. To provide a series of ascending and descending grades of said way of different degrees of declivity. 3. To provide a frame structure, pivotally suspended underneath, and positioned preferably at irregular intervals along, said way, one portion of the surfacing of said way resting on one of the vertical ends of said frame structure, and another portion of the surfacing of said way resting on the other vertical end of said frame structure, so that a heavy vehicle, passing over that portion of said surfacing farthest up the way at the same time a lighter vehicle is passing over that portion of said surfacing farthest down the way, will have a tendency to lift the light vehicle, for a short distance, clear of the way, while the heavy vehicle itself will have passed into and over a sudden and unexpected undulation in said way. 4. To provide lateral guards, preferably undulating, along the entire length of said way and a lateral inward inclination at the loop-portion of said way. 5. To provide gravity-actuated vehicles, suitably equipped with steering gears and brakes and of different seating capacities and of the general nature of "go-carts", to run on said way. 6. To provide a rotary, inclined elevator connecting the lowest point of the in-coming, with the highest point of the out-going, portions of the way, on which said vehicles are to be elevated from the returning, to the starting, point of said way. 7. Combining all of the foregoing features of said way, the object of our invention is to provide an elevated, inclined, undulating railless way for gravity-actuated vehicles with steering gears and brakes, so that said vehicles running singly or otherwise on said way and making the visible ascents and descents of said undulations will, by means of said suspended frame structure, suddenly run onto certain portions of said way that are depressed, and certain other portions that are elevated, by the weight of said vehicles, and so that, also, a number of said vehicles running on said way at one time will have the general appearance of an automobile or chariot race over a way that rises and falls like the billows of the sea. We attain these ends by means of the mechanisms set forth in the following illustrations, of which:

Figure 1 is a side elevation of said out-going and in-coming, U-shaped way, including the building that incloses the two ends of said way. Fig. 2 is a plan view of said out-going and said in-coming, U-shaped way, including the building that incloses the two ends of said way together with said rotary, inclined elevator, the stairway running alongside thereof, the reception room on the floor of which said vehicles are kept constantly in waiting and the exit room at the end of the in-coming portion of said way. Said view includes also the cliff-structure encompassed by said way. Fig. 3 is a perspective view of the frame structure suspended beneath, and positioned at irregular intervals along, said way, on the two ends of which rest the over-lapping, hinged portion of the sheet-iron surfacing of said way. Fig. 4 is a longitudinal section of a portion of said way showing said suspended frame structure in position underneath said way. Fig. 5 is a side elevation of said way with a portion of the lateral guards cut away in order to show said frame structure in position underneath said way, together with the undulations of both said way and the lateral guards thereof. Fig. 6 is a side elevation of a one-seated and a two-seated vehicle, equipped with steering gears and brakes, that run on said way.

Like letters and like figures represent like parts in all figures.

A indicates the out-going portion of said

way. B indicates the in-coming portion of said way. C indicates the cliff-structure between the out-going and the in-coming portions of said way. This cliff-structure, built of any suitable material, preferably of coke, is carried to a height sufficient to obstruct the view of the in-coming, while making the out-going, portion of said way, and vice versa. D indicates the inclosure built over the ends of said way. E indicates said rotary inclined elevator which can be run by any suitable means and which, also, connects the end of the out-going, with the end of the in-coming, portions of said way. It is on this rotary inclined elevator that the way-vehicles are elevated from the ending of one run to the beginning of another. F indicates the steps on the inside of the building and running alongside said rotary inclined elevator. G indicates the steps on the outside of said building that lead up to the floor from which the out-going portion of said way proceeds. H indicates said vehicles suitably equipped with steering gears and brakes. I indicates the said frame structure pivotally suspended beneath said way. J indicates the round iron bar on which said frame structure is pivoted. K indicates the cross-beam that supports said pivotal bar. L indicates the elliptical springs on which rests the upper end of said frame structure. M indicates the back-stop support for the lower end of said frame structure. N indicates the cross-beam supporting said elliptical springs.

O indicates the supporting frame structure on which the way is laid.

1 indicates the bearing-box that holds the pivotal bar J in place on the frame structure I.

2 indicates the over-lapping sheet-iron plates, one set of which is supported by the uppermost cross piece of one end, and the other set of which is supported by the uppermost cross piece of the other end, of said suspended, frame structure I.

3 indicates the hinges of the over-lapping plates 2.

Having thus described our invention by figures and in detail, we will now describe it as a working mechanism. The patrons of our new and improved pleasure device, having ascended the steps G to the upper floor of the building D and having entered the reception room within, find in said room in waiting either one-seated or two-seated vehicles provided with suitable stearing gears and brakes, and, having made a selection of said vehicles, and, having become seated therein, said vehicle is run out and started on its course along said way. These vehicles can be started singly or otherwise. The vehicles being subject entirely to the will of the occupant, they can, by means of the brakes, be given any desired speed along said way. The cliffs that lie at the left along said way and tower for quite a distance above it, not only present picturesque scenery to the view, but also cause said way to appear of much greater length than it actually is or would otherwise appear. In case the weight of the vehicle or vehicles passing over an upper set of said over-lapping sheet-iron plates is greater than that of a vehicle or vehicles passing over a lower set, the heavier vehicle or vehicles will depress the upper end of the suspended frame structure I and thereby make an unexpected dip or downward undulation, while the lighter vehicle or vehicles passing over the lower set of said plates will be suddenly lifted upward for a short distance or be caused to make a sudden upward undulation, according to the position said vehicle or vehicles occupy at the time on said plates. The loop in said way having been made, the straight run to the end of the way is then entered upon and made with like sudden dips and up-lifts of the vehicles as described above. Said way being of any suitable width from guard to guard and said vehicles being of ordinary width, any suitable number of vehicles can be run on and over said way at a time, and the appearance of said vehicles under such circumstances is that of an automobile or chariot race run over a track with undulations like the billows of the sea. The in-coming way having been completed and the vehicles having been freed of their occupants, said vehicles are run onto said rotary inclined elevator and elevated thereby to the floor above from which another trip around said way is begun.

Having thus described our invention as a working mechanism, what we claim and desire to secure by Letters Patent is:—

1. In amusement devices of the general nature of "switchbacks," a pivotal frame structure suspended beneath said way, one end of which supports one set of over-lapping surfacing plates, and the other end of which supports another set of over-lapping plates, of said way.

2. In amusement devices of the general nature of "switchbacks" and in combination, a railless way, in plan view U-shaped; suitable means for elevating, inclining and undulating said way; a pivotal frame structure suspended underneath said way, one end of which supports one set of over-lapping hinged surfacing plates, and the other end of which supports another set of over-lapping hinged surfacing plates, of said way; a cliff-structure erected between the out-going and the in-coming portions of, and carried a suitable distance above, said way; gravity-actuated vehicles, suitably equipped with stearing gears and brakes and of the general nature of "go-carts," run-

ning on said way; a rotary inclined elevator, connecting the two ends of said way and operating to elevate said vehicles from the lowest point of the in-coming portion, to the highest point of the out-going portion, of said way; and a suitable building inclosing the two ends of said way.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

MALCOLM W. McINTYRE.
R. PRICE CONNER.

Witnesses:
LEE H. BROOKS,
C. A. CANGROVE.