

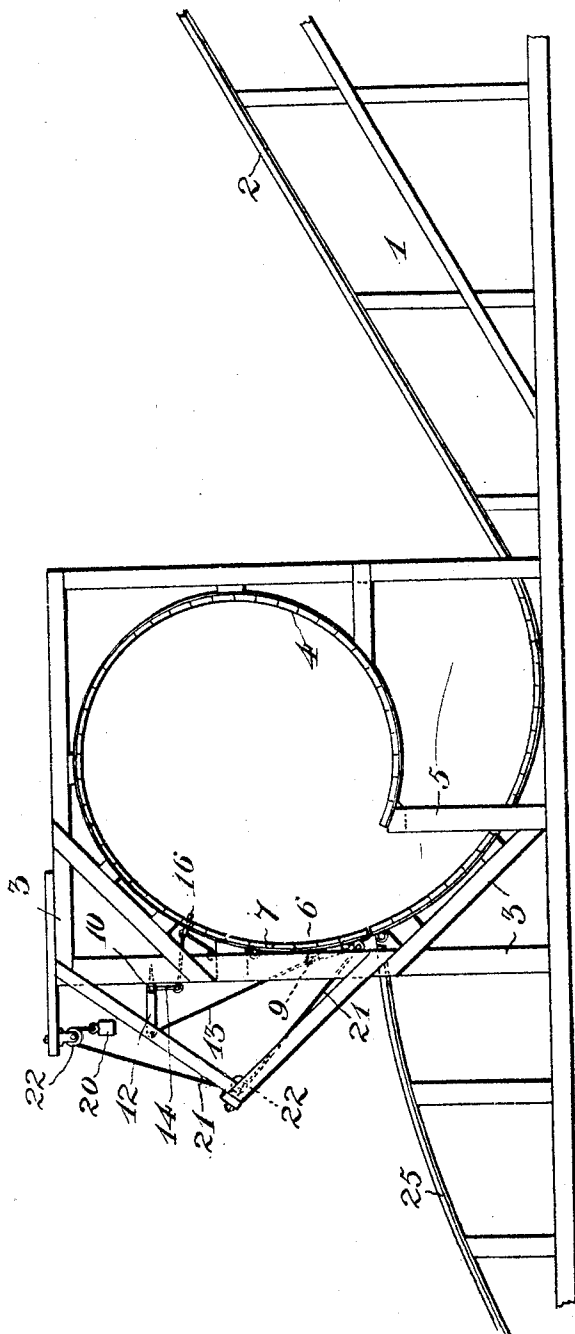
No. 798,966.

PATENTED SEPT. 5, 1905.

C. V. JOHNSON.
AMUSEMENT APPARATUS.
APPLICATION FILED FEB. 20, 1905.

2 SHEETS—SHEET 1.

FIG. 1.



Inventor

Carl V. Johnson

By *H. B. Wilson*

Attorney

Witnesses

C. H. Greisbauer

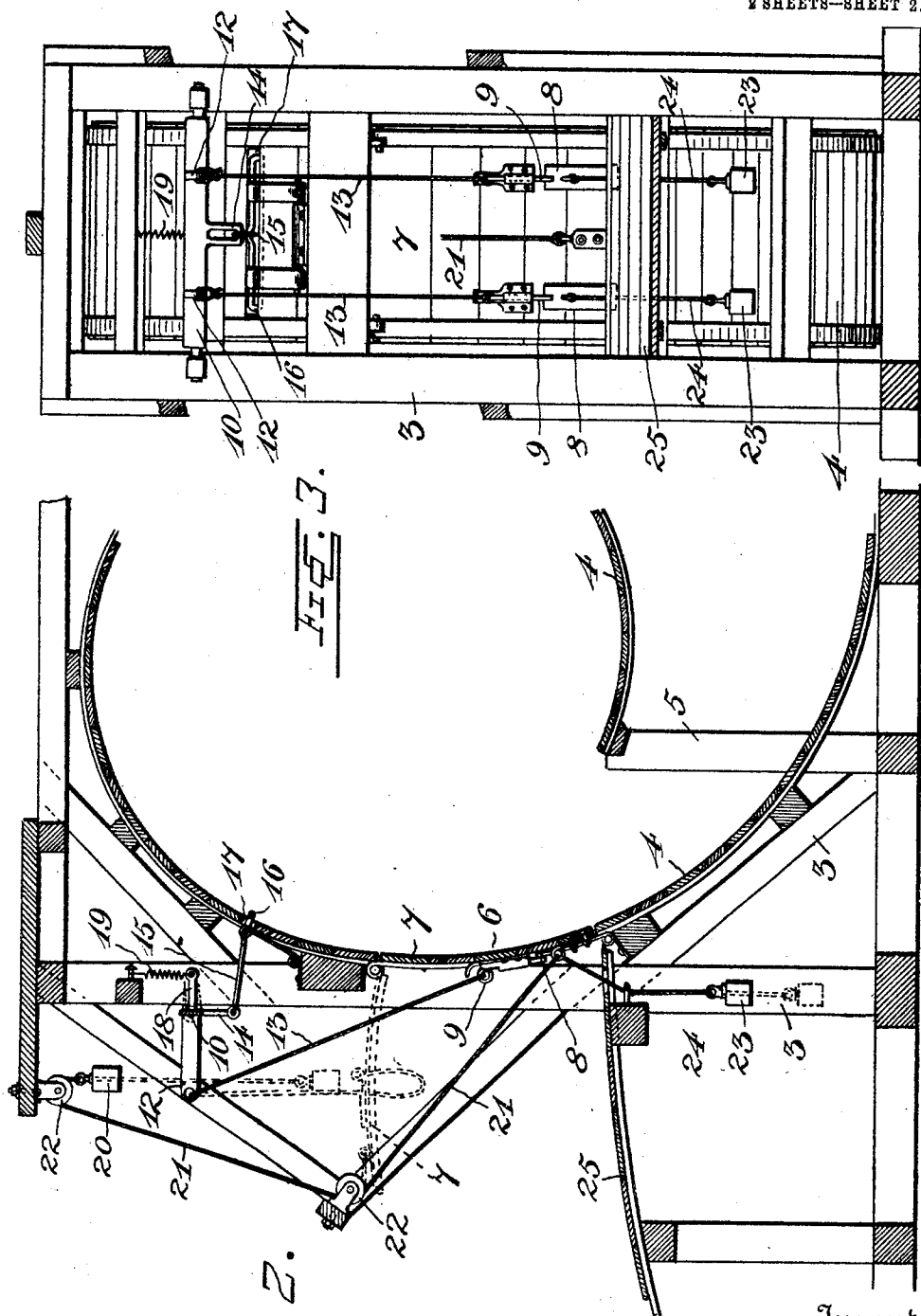
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2 SHEETS—SHEET 2.



Witnesses
C. M. M. M.
C. H. Griebner.

Inventor
Carl V. Johnson
by *A. B. Johnson*
Attorney

UNITED STATES PATENT OFFICE.

CARL V. JOHNSON, OF SALT LAKE CITY, UTAH.

AMUSEMENT APPARATUS.

No. 798,966.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed February 20, 1905. Serial No. 246,550.

To all whom it may concern:

Be it known that I, CARL V. JOHNSON, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Amusement Apparatuses; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in amusement apparatuses.

The object of the invention is to provide a device of this character in which a rolling object, such as a bicycle or car under the control of a rider or operator, is caused to travel down an incline and around a loop or spirally-shaped way or track, upon which said rolling object will be held by centrifugal force and by the momentum required from the passage of the same down an inclined way leading to said spiral loop.

Another object is to provide a spirally-constructed trackway of this character in which a portion of the way is omitted to form a break or space therein, said space being covered by a hinged section, which is automatically released and swung upwardly by the releasing of a suitable locking mechanism by the rolling object during the first passage of the same around said path or track.

A further object is to provide a simple and reliable locking mechanism for holding the hinged section of the track in place, which will be positively operated by the rolling object to release said swinging or hinged section to permit the same to be swung upwardly or opened.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of an apparatus of this character constructed in accordance with the invention. Fig. 2 is an enlarged longitudinal sectional view through a portion of the same, taken through the hinged section and the adjacent parts, said hinged section being shown in dotted lines in open position; and Fig. 3 is an end elevation of the apparatus looking toward the outer side of the hinged section and the locking mechanism for holding the same in place.

Referring more particularly to the draw-

ings, 1 denotes a supporting-frame in which is arranged an inclined trackway 2, said trackway being raised to a suitable elevation or inclination, which will give the proper momentum to the object rolling down the same. At the lower end of the incline-way 2 is arranged a supporting-frame 3, in which is secured a looped or spirally-constructed trackway 4, said trackway being preferably constructed of matched boards running crosswise to the length of the track and securely held in place, as shown. The trackway 4 is preferably constructed in a spiral manner to form substantially a loop and a half, the lower end or termination of the trackway being supported and attached to a suitable support 5. In the upward rise of the trackway adjacent or opposite to the terminating end of the same is formed a break or gap 6 of sufficient length to permit the rolling object, with its rider or operator, to pass freely through the same.

Arranged in the gap 6 to normally close the same is a section of track 7, said section being hinged at its upper end and adapted to swing outwardly and upwardly to the dotted-line position shown in Fig. 2 of the drawings. In order to normally lock or hold the hinged sections 7 in a lowered position to form an unbroken track or way, a suitable locking mechanism is provided. Said locking mechanism comprises a pair of catch-plates 8, which are hinged at their lower ends to a portion of the supporting-frame 3 and are adapted to be swung upwardly against the rear side of the hinge-section when the same is in closed position. Slidably mounted in suitable guides on the rear side of the hinged section are sliding bolts 9, which are adapted to be engaged with the upper ends of the catch-plates 8, thus holding the same and the hinged section 7 in operative position.

In order to release the swinging section to permit the same to be raised or swung upwardly to open the gap 6 in the spiral trackway, a suitable releasing mechanism is provided, said mechanism comprising a shaft 10, which is pivotally mounted on the upper portion of the frame 3 and has formed thereon laterally-projecting crank-arms 12, to the outer ends of which are secured flexible connections 13, the lower ends of said connections being secured to the bolts 9. Secured to the shaft 10 and projecting downwardly therefrom at right angles to the crank-arms is an arm 14, to the lower end of which is pivotally connected a link 15, the opposite

end of which is connected to a swinging bail 16. This bail 16 is hingedly mounted upon the frame 6 and is adapted to project through a transversely-disposed slot 17, formed in the spiral path or trackway immediately above the hinged end of the swinging section 7, whereby when a rolling object passes over this portion of the trackway the projected portion of the swinging bail 16 will be engaged and forced inwardly, thereby rocking the shaft 10 and causing the crank-arms 12 to pull upwardly upon the flexible connections 13 to release or disengage the bolts 9 from the hinged catch-plates 8, which will cause the same to drop or swing outwardly, thus releasing the hinged section 7 to permit the same to be raised or swung upwardly. To the shaft 10 is fixed a laterally-projecting arm 18, which extends in a direction opposite to that of the crank-arms 14, and to the same is connected a spiral spring 19. The tendency of this spring 19 is exerted to normally project the swinging bail into the slot 17 in the trackway and also to hold the shaft 10 against casual movement, which would release the locking mechanism of the hinged section at the wrong time.

In order that the hinged section 7 may be raised or swung upwardly when released from the holding mechanism, a suitable lifting or raising mechanism is provided, said mechanism being preferably in the form of a weight 20, suspended by a cord or cable 21, which passes through suitable guide-pulleys 22 on the frame 3 and is connected to an eye on the lower or free end of the hinged section, as shown.

In order that the catch-plates 8 may be caused to drop quickly and positively when released from engagement with the bolts 9, the same are provided with depending weights 23, which are connected thereto by short flexible connections 24. At the lower edge of the break or gap 6 in the spiral way 4 is formed a suitable inclined trackway 25, down which the rolling object runs after passing through said space or gap.

In using the apparatus the rolling object is started from the upper end of the inclined way or track, passing down the same to the first rise of the spiral trackway, up which the same then runs by the inertia or momentum gained during the passage down the inclined way 2, said momentum being sufficient to carry the rolling object up and over the first rise of the spiral track. As the rolling object passes up said rise the same will trip the releasing mechanism of the hinged section 7, thus permitting the same to be swung upwardly to open the gap 6. The rolling object, after reaching the top of the first rise in the spiral way, passes down the opposite side of the same and starts upon the second rise of

the spiral track until the termination of the same is reached, at which time the rolling object will leap the space between the termination of the second rise of the track and the first rise of the same and through the gap formed in said first rise and will then pass down the inclined trackway 25, thus looping the loop and leaping the gap.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an amusement apparatus, the combination with an inclined way, of a spirally-constructed way forming a continuation of said inclined way, a hinged section formed in said spiral way, hinged catch-plates arranged adjacent to the free end of said hinged section, bolts slidably mounted on said section to engage said hinged catch-plates, a crank-shaft, flexible connections between the cranks of said shaft and said bolts, and a trip mechanism arranged across said way which when actuated will rock said crank-shaft and disengage said bolts from the catch-plates, thereby releasing the hinged section, and means whereby said hinged section is raised or opened, substantially as described.

2. In an amusement apparatus, the combination with an inclined way, of a spirally-constructed way connected therewith, said spiral way forming substantially a loop and a half, a hinged section arranged in said way, hinged catch-plates adapted to engage and hold said hinged section in place, bolts slidably mounted on said hinged section to engage said plates, a spring-projected crank-shaft, flexible connections between the cranks on said shaft and said bolts, a hingedly-mounted trip-bar arranged across said way, a link connecting said trip-bar with said crank-shaft, whereby the same will be rocked thereby disengaging said bolts from said latch-plates and releasing said section, and a weight adapted to lift and open said hinged section when the same is released, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CARL V. JOHNSON.

Witnesses:

ELI R. WEAVER,
M. JOHNSON.