E. E. LAUN & O. KITCHELL.

SELF ACTING TURN TABLE.

APPLICATION FILED APR. 13, 1914.

1,118,658. Patented Nov. 24, 1914.

3 SHEETS—SHEET 1.

Fig. 1

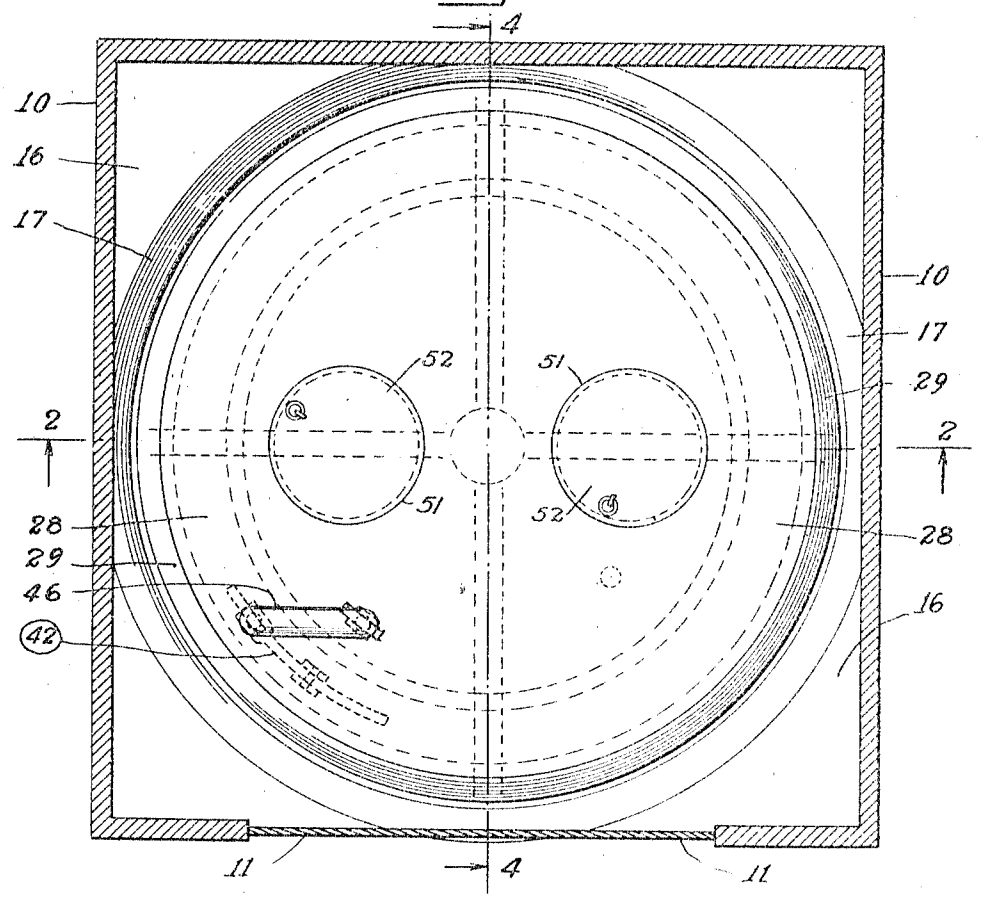
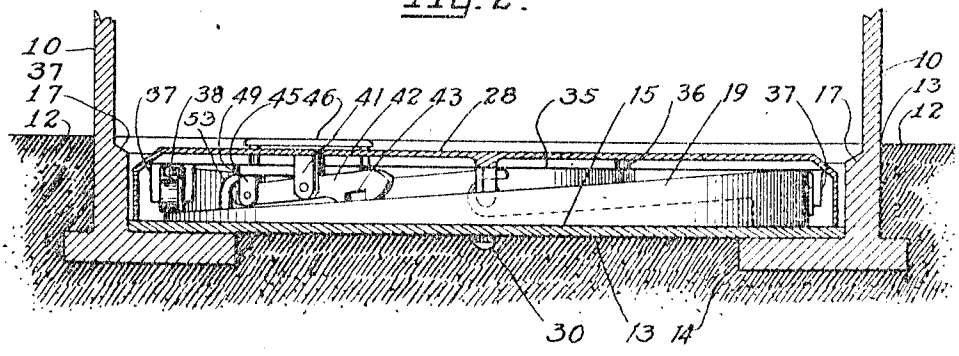


Fig. 2.



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3 SHEETS-SHEET 2.

Fig. 3.

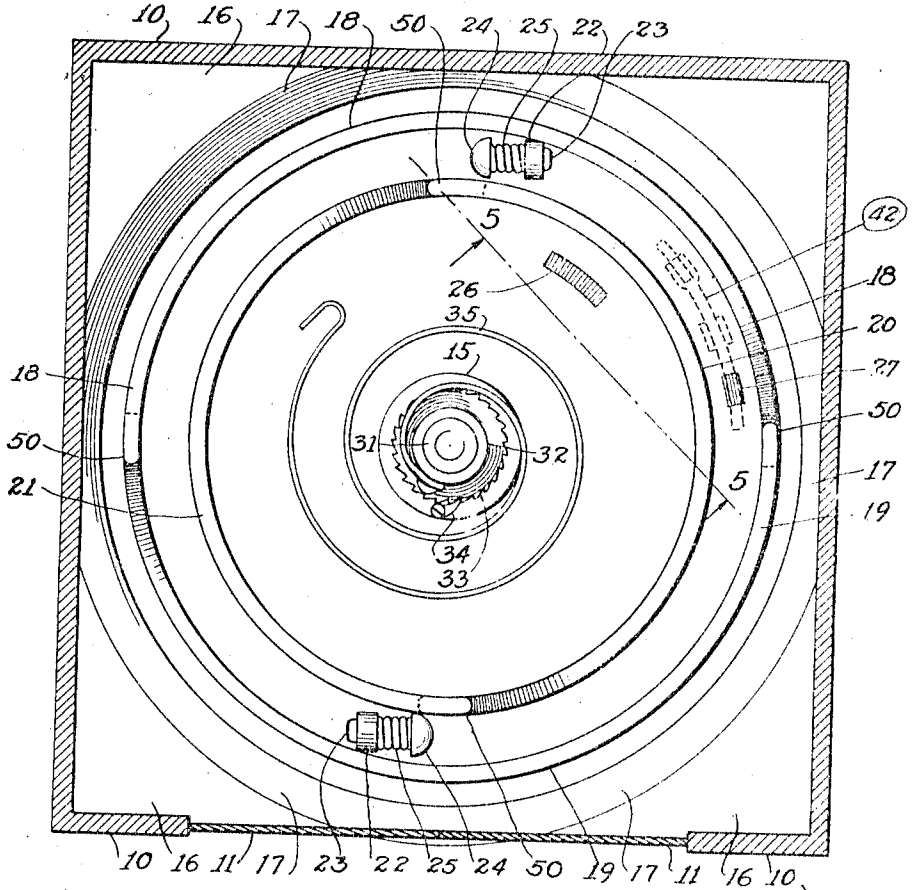
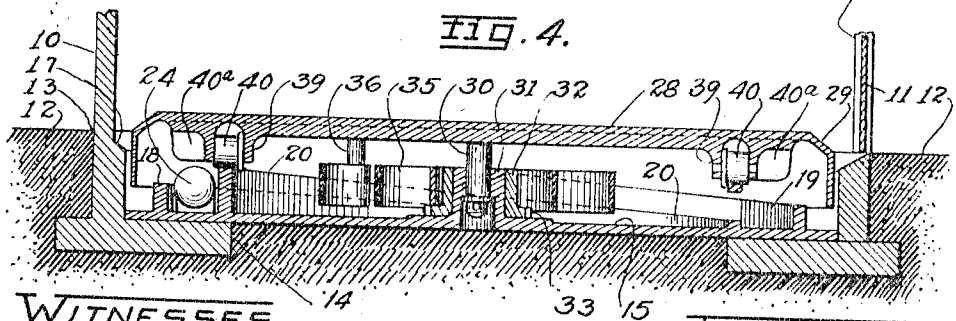


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

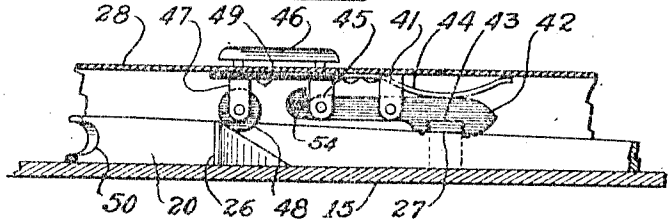


Fig. 6.

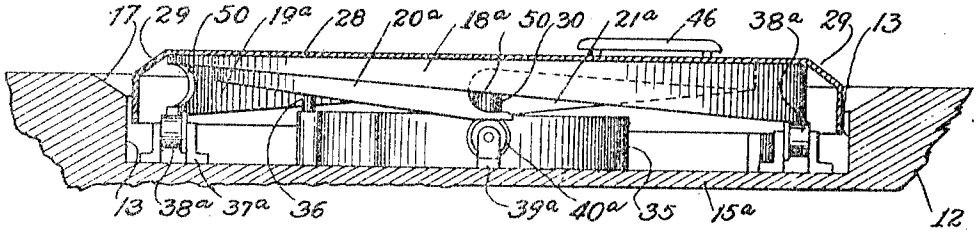
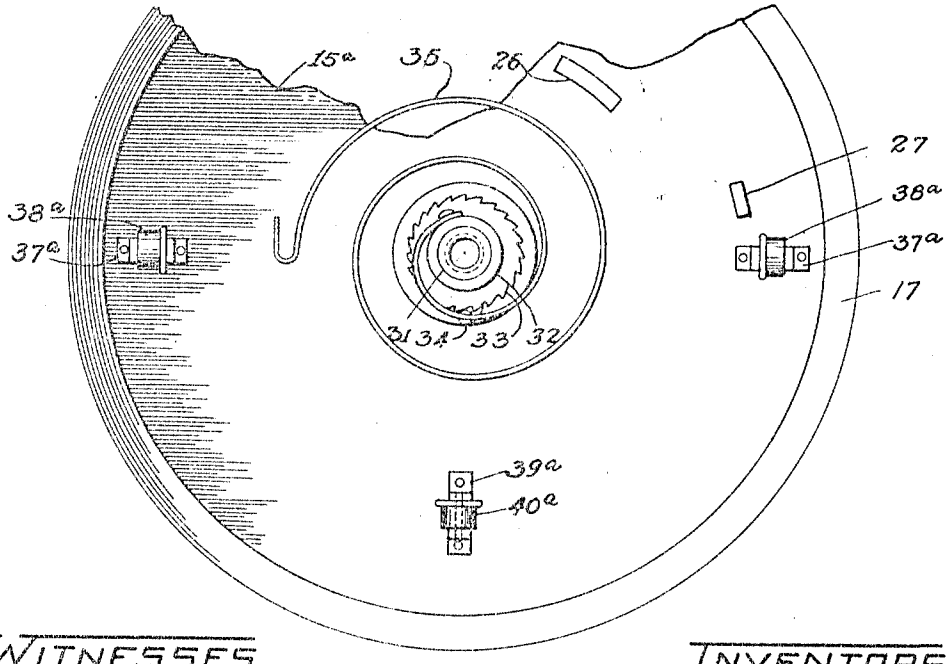


Fig. 7.



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UNITED STATES PATENT OFFICE.

ERNEST E. LAUN AND OSCAR KITCHELL, OF CHICAGO, ILLINOIS.

SELF-ACTING TURN-TABLE.

1,118,658. Specification of Letters Patent. Patented Nov. 24, 1914.

Application filed April 13, 1914. Serial No. 831,393.

To all whom it may concern:

Be it known that we, ERNEST E. LAUN and OSCAR KITCHELL, citizens of the United States, residing at the city of Chicago, in the county of Cook and State of Illinois have invented certain new and useful Improvements in Self-Acting Turn-Tables, of which the following is a specification.

This invention relates to improvements in self-acting turn-tables, which is particularly intended to be used within a garage or housing, for turning automobiles, after they are driven thereinto head or front first, so that they will front outwardly when a new or another trip is begun, but which may be used in turning automobiles or other vehicles within or without a garage or housing, and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of our invention is to provide a turn-table for any kind of vehicle and adapted for location within or without an inclosure, which shall be simple and inexpensive in construction, strong, durable, self-acting in both directions, that is, when loaded or unloaded with a vehicle, and efficient in operation.

Other objects and advantages of the invention will be disclosed in the subjoined explanation and description.

In the accompanying drawings, which serve to illustrate our invention Figure 1 is a plan view of the turn-table showing it located within an inclosure or garage, which latter is shown in section, and illustrating the supporting platform or table in the position it will occupy after the vehicle has been driven thereon and turned half way around so as to face the opening in the inclosure; Fig. 2 is a sectional view partly in elevation taken on line 2—2 of Fig. 1, looking in the direction indicated by the arrows, showing the positions the parts will occupy when the supporting table or platform and the vehicle thereon has been turned half way around to permit of the vehicle being driven or moved from the table; Fig. 3 is a plan view of the base of the apparatus, showing the surrounding housing therefor in section, and illustrating the turn-table or supporting platform removed; Fig. 4 is a central sectional view taken on line 4—4 of Fig. 1, looking in the direction indicated by the arrows, showing the supporting table or platform in its elevated position, or that position which it will occupy before the machine is driven thereon, in other words, in its initial position; Fig. 5 is a sectional view taken on line 5—5 of Fig. 3, looking in the direction indicated by the arrows, but illustrating a portion of the supporting table or platform with the releasing and starting mechanism therefor in engagement with the stop for the releasing mechanism and the starting device; Fig. 6 is a cross sectional view through the central portion of the turn-table and a part of the floor or base therefor, showing a modification in the construction of the supporting table or rotary platform and in the construction of the base plate therefor, and Fig. 7 is a fragmental plan view of the base plate constructed according to said invention.

Corresponding numerals of reference refer to like parts throughout the different views of the drawings:

Referring now to Figs. 1 to 5 inclusive of the drawings, the reference numeral 10 designates the walls of an inclosure such as a garage, which may be of the ordinary or any preferred construction, but preferably rectangular in shape, as shown, and provided in one of its walls with a doorway or opening 11, extending from the ground 12, upwardly, through which opening the automobile may be driven into the inclosure. As is clearly shown, the ground or floor 12 is provided with a depression or pit 13, into which the lower portions of the walls 10 are extended, and which pit is for the reception and operation of the turn-table. The lower portion of each of the walls 10 is preferably made of concrete and provided with horizontal inward extensions 14, located at the bottom of the pit 13 and at a suitable distance from the surface of the ground or floor 12. On the upper surface of these inwardly extended portions 14, when the same are used, and on the bottom of the pit 13, is located the base plate 15, which may be made of any suitable material and shape, but preferably circular to fit within the pit 13, which is also preferably circular, and has at the entrance or approach 11 to the turn-table, as well as at the rear portion thereof, a horizontal floor 16, the inner portion of which is inwardly and

downwardly beveled as at 17, for the purpose to be presently explained.

The base 15 is provided near its perimeter with a pair of oppositely inclined semi-circular tracks 18 and 19, which tracks are by preference formed integrally with the base 15 and extend upwardly therefrom as shown. The highest and lowest points of the track 18 are located diametrically opposite each other, and by preference on each side of a line drawn through the front of the middle portion of the entrance 11 to the middle portion of the rear wall 10 of the inclosure. The base 15 also has on its upper surface at a suitable distance from the semi-circular curved tracks 18 and 19, a pair of upwardly extended semi-circular and inclined tracks 20 and 21, which have their highest and lowest points located diametrically opposite each other and substantially at right angles to the highest and lowest points of the tracks 18 and 19, which are concentric with the inner tracks. The higher points of each of the inner tracks 20 and 21, which latter tracks are inclined in the same direction as the outer tracks, are by preference located on a line or substantially on a line drawn from the middle portion of the approach or entrance to the turn-table diametrically through the latter. At suitable points between the inner and outer tracks of the base 15, the same is provided with upwardly extended lugs 22, each of which is apertured for the reception of a bolt or plunger 23, which has on its other end a head 24, to contact with depending lugs on the supporting platform or rotary table and to act as buffers therefor, as will be presently explained.

Surrounding each of the bolts 23, between its head 24 and its lug 22, is a coiled spring 25, which will normally project the heads 24 of said bolts, but allow them to yield when contacting with the projections on the rotary table. Extended upwardly from the base 15 near the highest point of the track 20 is a beveled lug 26, and extended upwardly from the base 15 between the track 20 and the lower portion of the track 19 is a stop or catch 27 for engagement with the releasing lever which is carried by the rotary table or vehicle supporting platform 28, which may be made of any suitable size, form and material, but preferably circular, as shown. The platform or rotary table 28 is by preference provided at its periphery with an outwardly and downwardly beveled flange 29, the inclination of which beveled portion will co-act with the beveled portion 17 of the floor to aid the vehicle wheels in passing to and from the floor of the table. At its central portion the table 28 is provided with a downwardly extended spindle 30, which is vertically journaled in an upwardly extended socket 31, on the upper central portion of the base 15, which socket is loosely surrounded by a collar 32, having at its lower portion a ratchet wheel to engage a pawl 34 pivoted to the base 15, at a suitable distance from the socket 31 thereof. Secured at one of its ends to the rotary collar 32 is a spring 35 which has its other end connected to a projection 36 depending from the rotary table. By employing the rotary collar 32 with the ratchet wheel 33, it is evident that said collar may be turned on the socket 31 in the proper direction so as to regulate the tension of the spring 35, and the turning of said collar may be accomplished by any desired means.

Located on the lower surface of the table 28 near its periphery and at points diametrically opposite each other are depending hangers 37, each of which carries a roller 38 to travel on the outer inclined tracks 18 and 19 of the base. Located diametrically opposite each other on the lower surface of the table 28 and at right angles to the hangers 37 are hangers 39 each of which has journaled thereon a roller 40 to travel on the inner tracks 20 and 21 of the base.

By reference to Figs. 2, 3 and 5 of the drawings, it will be seen and understood that the highest point of the track 18 overlaps the lower end of the track 19, and the highest point of the track 19 overlaps the lowest point of the track 18, and also that the highest point of the track 20 overlaps the lowest part of the track 21, while the highest point of the last named track overlaps the lowest point of the track 20. This arrangement affords stops for the rollers 38 and 40, a portion 40^a of the brackets of which latter rollers will also contact with the buffers 24, and thus relieve the table of shock caused by its sudden stoppage. The table 28 has at a suitable point near its periphery a downwardly extended hanger 41, (see Fig. 5), on which is pivoted a releasing lever 42, which is provided with a recess 43 to engage the upper portion of the projection or catch 27 so as to hold the table against turning. The lever 42 is pressed by a spring 44 into engagement with the catch 27, which spring is interposed between said lever and the plate or platform 28 and is secured thereto at one of its ends. Pivotally connected to one end of the lever 42 is a link or member 45, which extends upwardly through a suitable opening in the platform 28 and is connected by means of a pedal bar or piece 46 to another link or member 47, which is extended through an opening in the platform 28, and has journaled on its lower portion a roller 48 to travel on the inclined surface of the beveled lug 26, which, as before stated, is extended upwardly from the base 15 near the catch 27 for the releasing lever. The links 45 and 47 are also connected by means of a bar 49, located horizontally below the plate 28, and at a sufficient distance from the

pedal bar or piece 46 to permit of some vertical movement of the links 45 and 47 through the platform.

When the parts are in the position shown in Fig. 5, and the pedal bar and releasing lever is in the opposite direction from that shown in Fig. 1 of the drawings, it is obvious that the rollers 38 and 40 will rest on the highest points of the inclined tracks and the starting roller 48 will rest on the uppermost portion of the beveled lug 26, while the releasing lever 42 will engage the catch 27 therefor, thus holding the platform 28 against rotation and in position for the vehicle to be driven thereon, in which operation it will be understood that one of the front wheels of the vehicle can be caused to strike the pedal bar 46, which will force the same downwardly, thus releasing the lever 42 from the catch 27, when, by reason of the gravity of the platform 28 and its load, the said platform will, by reason of the rollers 38 and 40, traveling on the inclined tracks, be automatically caused to turn until the rollers strike the buffers 24, and the cutout portions 50 in the highest points of the tracks. In this operation it will be understood that the platform or table 28 will make one-half of a revolution, and that the parts will assume the positions shown in Figs. 1 and 2 of the drawings, thus presenting the front end of the vehicle to the entrance or approach 11 of the turn-table. Of course, if desired, the pedal bar 46 may be pressed downwardly by means of the foot instead of by means of the wheel of the vehicle, as above explained, but in either way it will be seen that the roller 48 will assist in starting the revolution of the platform or table. After the table with the vehicle thereon has been automatically turned one-half way around, as above set forth, it is evident that the front of the machine or vehicle will face the opening of the garage or approach to the turn-table, and that the vehicle may be driven therefrom, when, by reason of the action of the spring 35, the tension of which has been increased by the turning of the platform, said platform will be rotated backwardly a half turn, thus causing the rollers 38 and 40 to travel upwardly on the inclined tracks until the releasing lever 42 engages the catch 27 therefor, when the table will be locked in position for the vehicle to be again driven thereon.

In the above described construction the inclined tracks are and have been described as being mounted on the base, and the rollers as being carried by the turn-table or platform, but this arrangement may be reversed, and in Figs. 6 and 7 of the drawings we have shown a modification in which the rotary platform 28 is provided on its lower surface with outer inclined tracks 18^a and 19^a and inwardly of said tracks with inclined tracks 20^a and 21^a, which tracks are of the same construction and arrangement with respect to one another as shown in the other views of the drawings and above described, except that they are carried by the rotary platform instead of the base. In this modification the base 15^a has mounted on its upper surface at diametrically disposed points brackets 37^a, each of which carries a roller 38^a to travel on the outer tracks of the construction shown in Fig. 6, and said base is provided on its upper surface at diametrically disposed points at right angles to the brackets 37^a with other brackets 39^a, each of which has journaled thereon a roller 40^a to travel on the inner tracks 20^a and 21^a of the rotary platform. In this modified construction the base 15^a is equipped with a retracting spring 35, a socket 31, a rotary collar 32, to which one end of the spring 35 is secured, a ratchet 32, and pawl 34 and for the same purposes as in the other construction, besides, the base 15^a has a beveled starting lug 26 and a catch 27 for the releasing lever and its operating mechanism as in the other construction.

The platform 28 may be provided with openings 51, having removable covers 52, through which openings access to the mechanism located between the platform and the base may be had by removing the covers 52 for the purpose of repairing or adjusting said mechanism.

In order to hold the platform 28 against rotation after it has turned to about the position shown in Fig. 1, and the brackets of the rollers have struck the buffers 24, the base 15 is provided with an upwardly extended spring arm 53 (see Fig. 2), having a hook or catch at its upper end to engage the catch 54 on that end of the lever 42 opposite the recess 43 therein.

Having thus fully described our invention what we claim as new and desire to secure by Letters Patent is—

1. The combination with a base, of a platform rotatably mounted above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of segmental and oppositely disposed and inclined tracks suitably supported between the base and platform, and rollers suitably supported to contact with the inclined surfaces of said tracks.

2. The combination with a base, of a platform rotatably mounted above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of segmental and oppositely disposed and inclined tracks suitably supported between the base and platform, and rollers suitably supported to contact with the inclined surfaces of said tracks, and

means for locking the platform against rotation and for releasing the same.

3. The combination with a base, of a platform rotatably mounted above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of outer segmental and oppositely disposed and inclined tracks suitably supported between the base and platform, a pair of inner segmental and oppositely disposed and inclined tracks suitably supported between the base and the platform with their highest points at substantial right angles to the highest points of the first named tracks, and rollers suitably journaled to contact with the inclined surfaces of said tracks.

4. The combination with a stationary base, of a platform rotatably mounted thereon and above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the same in one direction, a pair of segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base, and rollers journaled on the lower surface of the platform to travel on the inclined surfaces of said tracks.

5. The combination with a stationary base, of a platform rotatably mounted thereon and above the same, a spring connected at one of its ends to the base and at its other end to the plattorm and adapted for turning the latter in one direction, a pair of outer segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface or the base, a pair of inner segmental and oppositely disposed and inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base with their highest points at substantial right angles to the highest points of the first named tracks, and rollers journaled on the lower surface of the platform to travel on the inclined surfaces of said tracks.

6. The combination with a stationary base, of a platform rotatably mounted thereon and above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of outer segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base, a pair of inner segmental and oppositely disposed and inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base with their highest points at substantial right angles to the highest points of the first named tracks, rollers journaled on the lower surface of the platform to travel on the inclined surfaces of said tracks, and means for locking the platform against rotation and for releasing the same.

7. The combination with a stationary base, of a platform rotatably mounted thereon and above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base, rollers journaled on the lower surface of the platform to travel on the inclined surfaces of said tracks, and means for locking the platform against rotation and for releasing the same.

8. The combination with a stationary base, of a platform rotatably mounted thereon and above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base, rollers journaled on the lower surface of the platform to travel on the inclined surfaces of said tracks, and means for locking the platform against rotation for releasing and starting the same.

9. The combination with a base, of a platform rotatably mounted above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of outer segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base, a pair of inner segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base, with their highest points at substantial right angles to the highest points of the first named tracks, a spring actuated buffer located between the elevated portion of each of the inner tracks and the outer tracks, and rollers journaled on the lower suface of the platform to travel on the inclined surfaces of said tracks.

10. The combination with a base, of a platform rotatably mounted above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of outer segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base, a pair of inner segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the upper surface of the base with their highest points at sub-

stantial right angles to the highest points of the first named tracks, a spring actuated buffer located between the elevated portion of each of the inner tracks and the outer tracks, rollers journaled on the lower surface of the platform to travel on the inclined surfaces of said tracks, and means for locking the platform against rotation and for releasing the same.

11. The combination with a stationary base, of a platform rotatably mounted thereon and above the same, a spring connected at one of its ends to the base and at its other end to the platform and adapted for turning the latter in one direction, a pair of segmental and oppositely inclined tracks diametrically disposed with respect to one another and mounted on the lower surface of the platform, and rollers journaled on the upper surface of the base to contact with the inclined surfaces of said tracks.

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