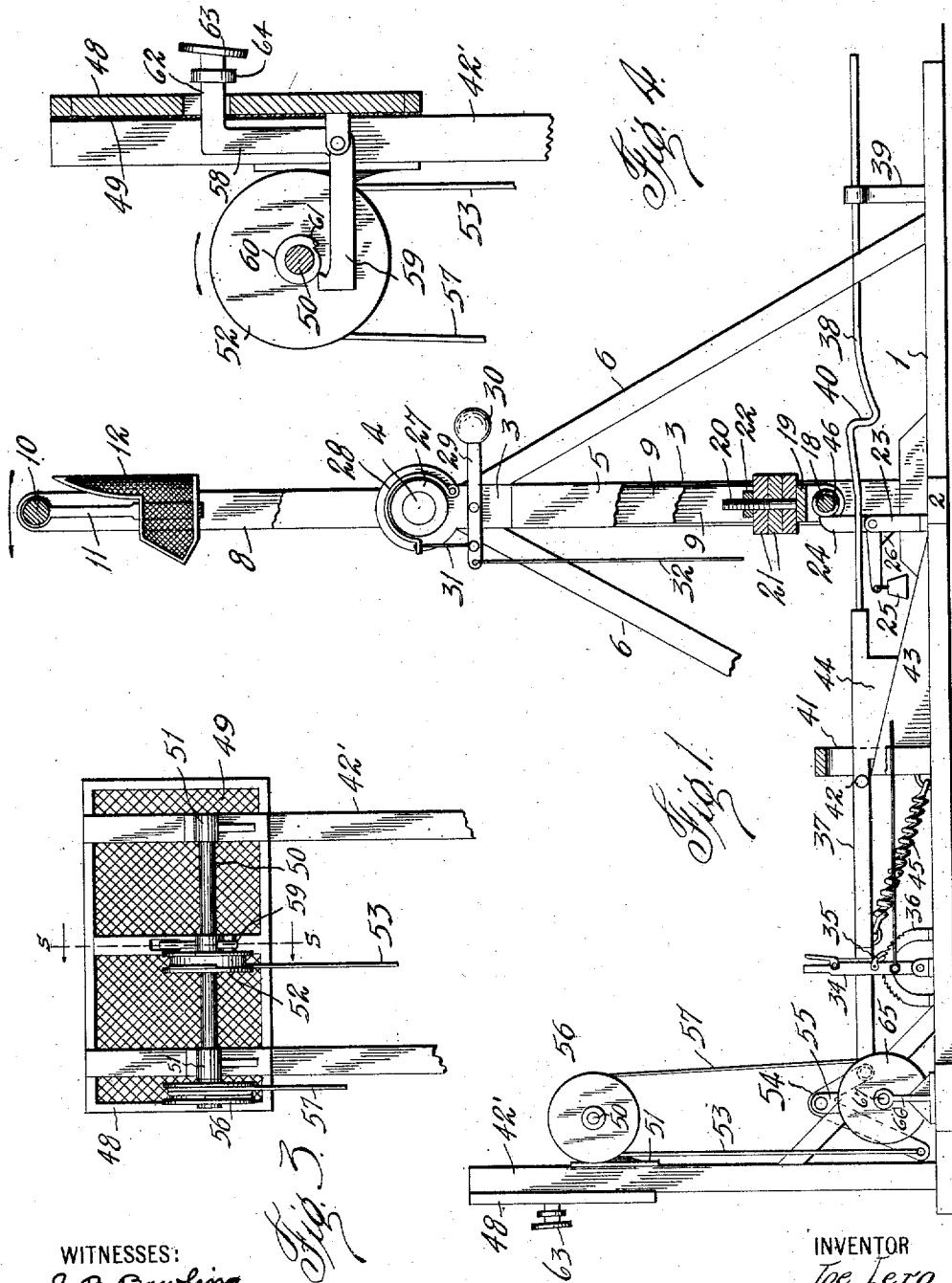


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 TARGET CONTROLLED ROUNDABOUT.
 APPLICATION FILED MAR. 2, 1911.

1,019,972.

Patented Mar. 12, 1912.

2 SHEETS—SHEET 1.



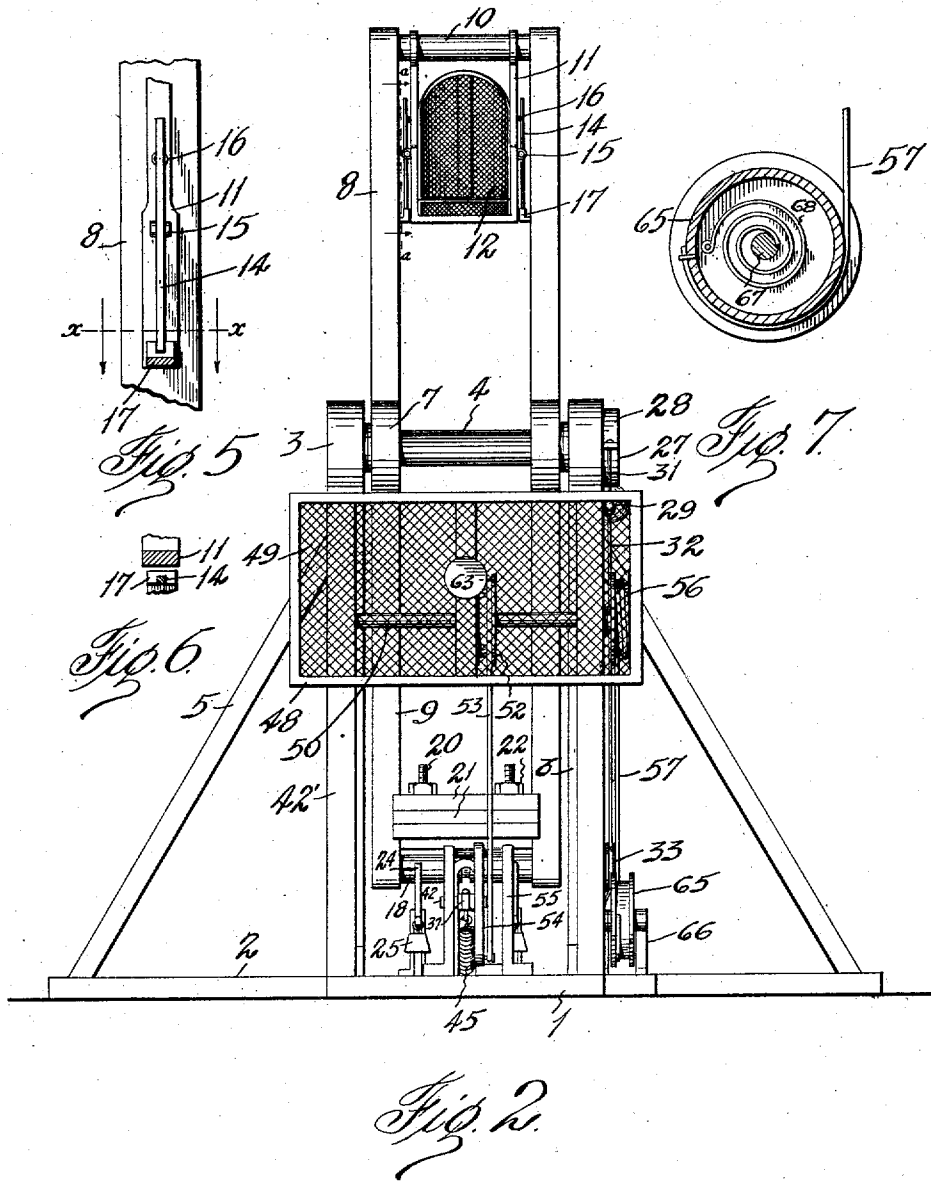
WITNESSES:
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UNITED STATES PATENT OFFICE.

JOE LERO, OF DALLAS, TEXAS.

TARGET-CONTROLLED ROUNDABOUT.

1,019,972.

Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed March 2, 1911. Serial No. 611,742.

To all whom it may concern:

Be it known that I, JOE LERO, citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Target-Controlled Roundabouts, of which the following is a specification.

This invention pertains to target-controlled roundabouts.

The object of the invention is to provide a device comprising a revoluble member arranged to be operated by a plunger.

A further feature resides in means for setting the plunger against the tension of a spring and including a releasing device and target, whereby a projectile striking the target will cause the release of the plunger and which latter will impart an impulse to the revoluble member sufficient to start the first revolution of the same.

Other features reside in the provision of a brake whereby the revolution of the revoluble member may be controlled; a carriage hung in the revoluble member, devices for holding the carriage from swinging and adapted to release the carriage to permit it to swing; counter-balancing weights on the revoluble member to maintain the same normally in a vertical position and to assist in returning the member to said position; and devices forming stops with which the lower end of the revoluble member contacts when returning to its normal position.

A still further object of the invention is to provide means of the character described that will be strong, durable, efficient, and easy of operation, simple and comparatively inexpensive to construct, and also in which the several parts will not be likely to get out of working order.

With the above and other objects in view, the invention has relation to certain novel features of construction and operation, an example of which is described in this specification and illustrated in the accompanying drawings, wherein:

Figure 1. is a side elevation with portions broken away and other portions in section, Fig. 2. is a front elevation, Fig. 3 is a rear elevation of the screen and releasing means, Fig. 4. is a vertical sectional view on the line S-S of Fig. 3, Fig. 5. is a detail of one of the carriage fastening devices, a portion

being shown in section and taken on the line *a-a* of Fig. 2, the carriage omitted, Fig. 6. is a horizontal cross sectional view on the line *x-x* of Fig. 5, and Fig. 7. is a detail of the spring winding drum shown in vertical section.

In the drawings, the numeral 1 designates a suitable base from the central portion of which lateral sills 2 extend. Standards 3 extend vertically from the base plate at the intersections of the sills and said base. At the upper end of the standards a horizontal shaft or axle 4 is rotatably supported. The standards are held in place by braces 5 and 6. Between the standards the hubs 7 of a revoluble member are fixed on the shaft 4 and spaced apart as shown in Fig. 2. Two arms 8 and 9 extend from each hub in diametrically opposed relation. The arms 8 are shorter than the arms 9, the purpose of which will be hereinafter described. The outer ends of the arms 8 are connected by a transverse bar 10 on which the U-shaped hanger 11 of a carriage 12 is mounted to swing.

The carriage normally hangs between the arms 8 and is held against swinging by latches 14. A latch lever is provided on each side of the hanger between the same and the said arm. These latches are pivoted to the hanger at 15 and between the upper end of each latch and the hanger an expansion spring 16 is confined as shown in Figs. 2 and 5. These springs tend to force the upper ends of the latch levers outward whereby the lower ends are held in notched keepers 17 projecting inwardly from the arms 8 as shown in Figs. 2, 5 and 6. It is evident that when the arms are swung the carriage will remain fixed between the same, but when the upper ends of the latch levers are swung inward against the hanger their lower ends will be withdrawn from the keepers and the carriage permitted to swing outward from between the arms and maintain a vertical position as said arms are swung downward. The carriage being swung outward can be brought close enough to the base 1 when the arms are swung downward, to permit a person to enter the carriage or the placing of a figure in said carriage where the device is used as a toy. Suitable means (not shown) may be

provided on the carriage for fastening a person or figure in the same to prevent displacement during the revolution of the arm.

The free ends of the arms 9 are connected
5 by a transverse bar 18 a short distance inward from which a transverse support 19 is secured. From this support fixed pins
10 20 extend inwardly and parallel with the arms 9. A plurality of counter-balancing weights 21 are provided with suitable openings to receive the pins and are placed in position on the support 19. The pins are screw threaded to receive nuts 22 which are engaged with the innermost weight where-
15 by said weights are fastened against displacement during the revolution of the revoluble member. The weights are varied according to the load in the carriage and their weight is always slightly in excess to that
20 of the load so as to cause the revoluble member to return to its upright or normal position with the carriage at the upper end and also to maintain said member in such position.

25 On the base between the standards a pair of brackets 23 are mounted. In each bracket a bell crank lever 24 is mounted. Each lever has a weight 25 at the end of its horizontal member which latter rests on a lug 26 extending from the bracket whereby the vertical member of the lever will be held in the path of the bar 18. When the revoluble member is revolved in the direction shown by the arrow in Fig. 1 the bar 10 will pass
30 above the lever 24 because the arms 8 are not as long as the arms 9, but the bar 18 will strike the upper ends of the levers and swing and pass the same. However should the arms 9 after passing the levers swing backward or in a reverse direction the bar 18
40 will strike the levers 24 which will not yield and thus stop the member in its upright position.

One end of the axle 4 is extended beyond
45 one of the standards and to this end a brake drum 27 is fastened. A brake band 28 has one end fastened to the standard and partially surrounds the drum. On the outer side of said standard a lever 29 is pivoted
50 and provided at its rear end with a weight 30 which acts to swing the forward end of said lever upward. A connection 31 extends from a point near the forward end of the lever to the free end of the brake band.

55 From the forward end of the lever 29 a flexible connection 32 extends downward and passes under a pulley 33 (see Fig. 2) suitably supported near the lower end of the adjacent standard. The said connection extends forward from the pulley and is secured to a lever 34 above the pivot point of the same. This lever is pivoted on the base and has a dog 35 engaging a toothed segment 36. By swinging the lever 34 the operator
65 may tighten or loosen the brake band 28

about the drum 27. By means of the brake mechanism the revolution of the revoluble member may be controlled and the member stopped at any desired point, as for instance when the occupant of the carriage is entering
70 or leaving the same or in stopping the member in its upright position.

Longitudinally of the base a plunger 37 is mounted. At the rear end of the plunger a resilient rod 38 is provided and supported
75 to slide through a post 39 mounted on the rear portion of the base. The rod is provided with a shoulder 40 which normally occupies the position in rear of the cross bar 18 as shown in Fig. 1. The plunger extends through a vertical guide bracket 41
80 and its rearward movement is limited by a transverse pin 42 which engages the forward side of said bracket. A block 43 extends rearwardly from the bracket 41 and has its
85 upper surface inclining downward from said bracket. A shoe 44 depends from the plunger and has its under surface inclined at substantially the same angle as that of the block. The shoe rests on the block but rides
90 up the same when the plunger is drawn forward. A spring 45 has one end secured at the bottom of the bracket 41 and its other end to the underside of the plunger a short distance from the forward end thereof.
95 When the plunger is drawn forward against the tension of the spring its rear end will be gradually raised so that the rod 38 rides into a peripheral groove 46 in the bar 18. When the plunger reaches the end of its forward movement the shoulder 40 will be
100 sprung up into the groove and bear against the bar 18 at the forward side of the same. When the plunger is released the spring 45 will draw it rearward with considerable
105 force and the shoulder 40 bearing against the bar 18 will impart a sufficient impulse to the revoluble member to cause the latter to revolve one or more times. It is obvious that the counter-balancing weights will always
110 return the member to its normal position, but the brake mechanism may be employed to arrest the member at any desired point.

This device is designed to be used as an amusement in public places or to be built
115 on a small scale for use as a toy. It includes a target at which a suitable projectile is thrown and which target is connected to means for releasing the plunger and permitting it to be drawn rearward by the
120 spring 45.

At the forward end of the base a pair of vertical posts 42' are mounted. These posts support at their upper ends a frame 48
125 which is covered with a suitable wire fabric 49 which prevents projectiles as base balls and other balls, from going beyond the frame. In rear of the frame a shaft 50 is supported horizontally in brackets 51 extending from the posts as is best shown in
130

Fig. 3. A drum 52 is fixed near the center of the shaft and receives one end of a flexible connection 53 fastened at its lower end to the long arm of an inverted bell crank lever 54 which latter is mounted at the upper end of a bracket 55 secured on the base. The short arm of said lever is pivotally connected to the forward end of the plunger 37. As shown in Fig. 2 the connection 53 is wound on the drum 52 so as to depend from the forward side of the same. On the end of the shaft 50 another drum 56 is fastened. A flexible connection 57 is coiled about this latter drum and is wound thereon in a direction opposite to the winding of the connection 53 on the drum 52 and thus when the connection 57 is unwound from the drum 56 rotation will be imparted to the drum 52 and the connection 53 wound on the latter. When the connection 53 is wound upon its drum the lever 54 will be swung so as to draw the plunger forward.

An angular latch 58 is pivoted to the center of the frame 48 as shown in Fig. 4. This latch has a rearwardly extending hook member 59 which extends under and bears against a hub 60 attached to the drum 52. This hub has a lug 61. When the drum 52 is wound it is rotated in the direction of the arrow shown in Fig. 4 and a sufficient distance to cause the lug to engage the hook member whereby the plunger will be held at its forward position. At its upper end the latch 58 has a forwardly projecting trigger 62 extending through the frame and terminating a short distance in front of the same. On the free end of the trigger a target 63 is secured and a short distance in rear of the target a stop collar 64 is fixed on the trigger and adapted to engage the frame to limit the rearward movement of said trigger. When the target is struck the latch 58 is swung on its pivot whereby the hook member is swung downward out of engagement with the lug and the plunger released.

It may be sufficient to have the lower end of the connection 53, free so that said connection may be pulled down either mechanically or manually, but I believe it best to mount a spring drum 65 in a bracket 66 secured to the base and attach the free end of said connection thereto. In Fig. 7 the drum is shown as mounted on a shaft 67. This shaft is fixed in the bracket 66 and the drum is free to rotate. Within the drum a winding spring 68 has one end fixed to the shaft and its outer end attached to the drum. The spring is arranged so as to rotate the drum and wind the connection 57 thereon when the latter is pulled downward, but said spring is of not sufficient tension to wind said connection unless the same is first moved downward.

The operation of the apparatus is as follows: The connection 57 is pulled down-

ward whereby the shaft 50 is revolved which rotates the drum 52 and winds the connection 53 thereon. After the drum 52 has revolved a certain distance the lug 61 will catch behind the hook of the member 59 thus setting the trigger 62. When the connection 53 is wound on the drum 52 it swings the bell crank lever 54 forward and upward, the short arm of said lever being raised to a substantially horizontal position. This movement of the bell-crank lever 54 draws the plunger 37 forward which moves the rod 38 forward and tensions spring 45. As the plunger moves forward the shoe 44 rides up the inclined block 43 whereby the rod is elevated until the shoulder 40 is in line with the bar 18. The entire apparatus is now ready for the releasing operation. When the target 63 is hit by a base ball or other object thrown at the same, said target is forced inward. This swings the latch 58 so that the member 59 is swung downward thereby disengaging from the lug 61 and releasing the drum 52. The spring 45 is now free to return the plunger 37, which it does with sufficient force and rapidity as to cause the shoulder 40 to strike the bar 18 and start the revoluble member revolving. The weights at each end of the revoluble member are so nearly equal that the blow struck will cause one or more revolutions which may be checked by operating the lever 34 and the brake band 28. The weights 21 are just heavy enough to return the revoluble member to its normal position, the levers 24 preventing a reverse revolution of the member. After the shoulder 40 strikes the bar the plunger continues its rearward movement until the pin 42 strikes the bracket 41.

What I claim is:

1. In an amusement device, a base, a support mounted on the base, a revoluble member mounted on the support, a carriage attached to the member, a spring plunger adapted to engage the member, a device for setting the plunger under tension, and a target-operated releasing device coöperating with the setting device.

2. In an amusement device, the combination with a revolubly supported member, and an operating plunger adapted to engage the member, of a carriage hanger mounted in the member, and latching devices carried by the hanger and engaging with the member.

3. In an amusement device, a support, a revoluble member mounted on the support, a carriage mounted on the member, a counterbalancing weight carried by the member in diametrically opposed relation to the carriage, a reciprocating device disposed under the revoluble member, a spring connected to the device, a lever connected to the plunger, a drum, a connection wound on the drum

and attached to the lever, a device for rotating the drum, a latch member adapted to engage the drum, and a target carried by the latch.

- 5 4. In an amusement device, a support, an axle mounted in the support, revoluble hubs mounted on the axle, arms extending from the hubs in opposed relation and arranged in pairs, a carriage mounted between
10 one pair of arms, counter-balancing weights mounted between the other pair of arms, stop devices cooperating with one of the pairs of arms, a brake mechanism associated with the axle, and a reciprocating device for
15 swinging the arms.

5. In an amusement device, a support, a revoluble member mounted on the support and provided with opposed arms, a carriage mounted on the arms, counter-balancing
20 weights mounted on the arms in opposed relation to the carriage, and a reciprocating operating member arranged to engage the revoluble member.

6. In an amusement device, a support, a
25 revoluble member mounted on the support, a reciprocating operating member arranged to engage the revoluble member, a device for

moving the reciprocating member forward, and a latch device cooperating with the last named device.

7. In an amusement device, a pair of standards, an axle mounted between the standards, arms extending from the axle in opposed relation and arranged in pairs, a carriage supported between one pair of
35 arms and fastened against movement with relation to said arms, counter-balancing weights disposed between the other pair of arms, a bar extending between the last named arms adjacent the weights, a plunger,
40 a resilient rod extending from the plunger and having a shoulder adapted to engage the bar, a spring having one end fixed and the other end attached to the plunger, pivoted stop devices located in the path of the
45 bar, and target controlled operating apparatus connected to the plunger.

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

JOE LERO.

Witnesses:

W. S. CASTLE,
JACK A. SCHLEY.