

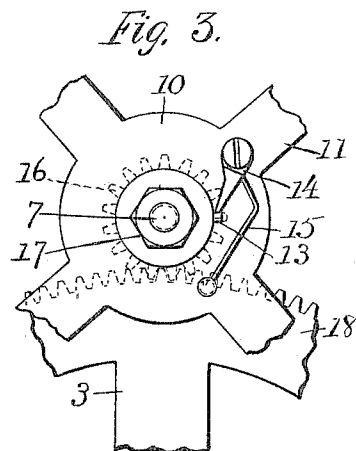
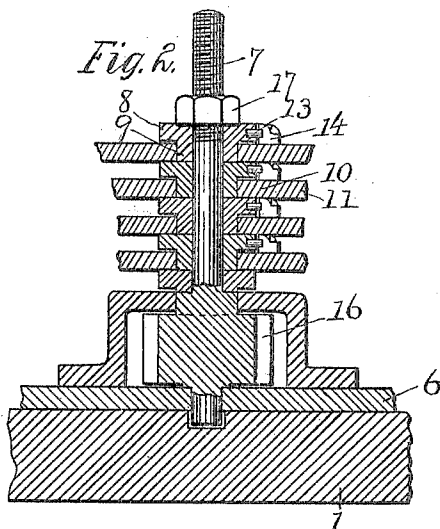
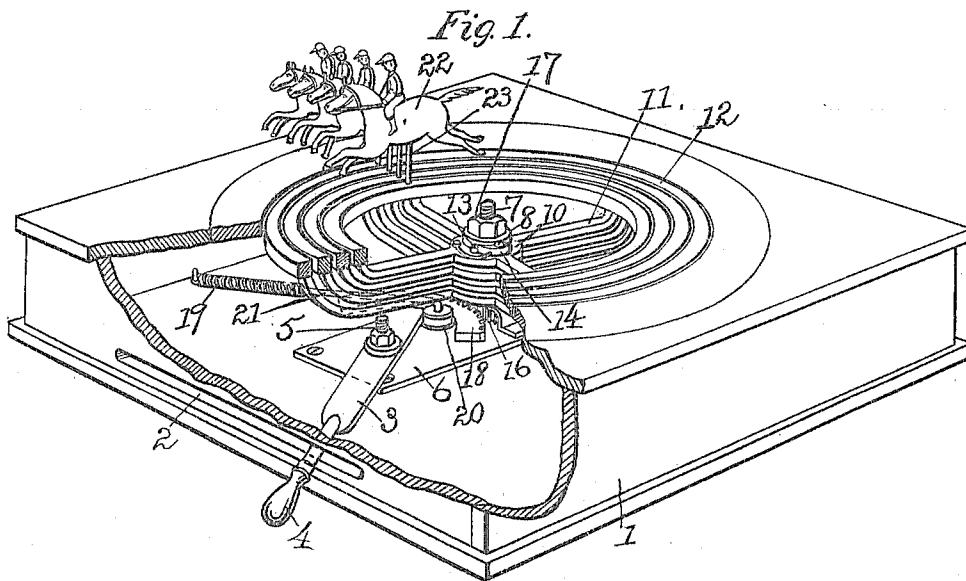
No. 820,819.

PATENTED MAY 15, 1906.

E. J. NOBLE.

TOY.

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UNITED STATES PATENT OFFICE.

EDWARD J. NOBLE, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO JAMES F. ROBINSON, OF GLASTONBURY, CONNECTICUT.

TOY.

No. 820,819.

Specification of Letters Patent.

Patented May 15, 1906.

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To all whom it may concern:

Be it known that I, EDWARD J. NOBLE, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented and produced a new and Improved Toy, of which the following is a specification.

My invention relates more especially to the class of toys or amusement devices in which a race is illustrated; and the object of my invention is to provide a device of this class in which the movement of each of the figures shall be independent of the movement of the other figures; and a further object is to provide a device of this class that shall be extremely simple in construction and operation whereby a comparatively inexpensive device may be produced that shall embody the essential features of ease in operation. A form of device in the use of which these objects may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved toy with parts broken away to show construction. Fig. 2 is a detail view, on enlarged scale, in section through the pivotal support of the base-rings. Fig. 3 is a detail view, on enlarged scale, showing the means for operating the base-rings.

In the accompanying drawings the numeral 1 denotes a case that may be suitably formed and composed of any desired material. As herein shown, this is constructed of wood rectangular in form and of proper depth to contain the moving parts of the device. A slot 2 is formed through one wall of the case, preferably near the bottom, and through this slot projects an operating-lever 3, having a handle 4 at its outer end. This lever is pivoted on a stud 5, projecting upward from a supporting-plate 6, secured to the bottom of the case 1. A central support 7, mounted in the plate in any desired manner, projects upward therefrom, and a number of bearings are mounted on this post. The post is so mounted in the plate 6 that it may freely rotate therein, and each of the bearings has a flange 8 and a neck 9. A base-ring is mounted on each of the bearings—in the form herein shown there being four bearings and four base-rings. The bearings are arranged on the post so that they lie one against the other, the space between the flanges 8 being slightly greater than the

thickness of the base-rings supported thereon, so that the base-rings may turn freely independently of the flanges, but have no tipping movement. The base-rings each include a hub 10, from which project radial arms 11, any desired number being employed for each ring, and a rim or base 12. A pin 13 projects from the flange 8 of each of the bearings, and a pawl 14 is pivoted on the hub 10 of each of the base-rings, these pawls being held in position to engage the pins 13 by a suitable spring 15. A pinion 16 is mounted on the post or support 7, and a nut 17, secured to the outer threaded end of the post, clamps each of the bearings, the pinion 16, and the post 7 together, so that they all rotate as one. A toothed segment 18 is mounted on the end of the lever 3, the teeth of the segment engaging with the teeth of the pinion 16. A spring 19 is secured at one end to the case 1, and its opposite end bears a roller 20, adapted to engage with the lever 3 to hold it, with the segment 18, at one limit of its play. In the construction herein shown a rod 21 is secured to the spring and is bent at its outer end to receive the roller 20. The roller 20 is preferably grooved to receive the edge of the lever 3. Each of the base-rings supports on the rim 12 a figure, those herein shown being horses with riders thereon, these horses 22 being supported on posts 23, projecting upward from the rims 12.

In the operation of the device the handle 4 being grasped is swung to the left, as shown in Fig. 1. In the position of the parts, as shown in Fig. 1, the horses are all in line, each of the pawls 14 being in engagement with a pin 13 on each of the flanges 8. As the lever is swung the engagement of the teeth on the segment 18 with the pinion 16 causes each of the base-rings to be rotated, and when the lever 3 has been swung to its full extent of movement the momentum given to the rings cause them to rotate, carrying the figures supported thereon. The extent to which the base-rings, with the figures supported thereon, will move will depend upon the amount of friction on the bearings of each of the rings and also between the pawls and the pins, and this movement will also depend upon various other conditions. It will thus be seen that no two figures will stop in the same position, but that the movement of each figure after the force

applied by the lever 3 has been removed will be entirely independent of the movement of the other figures.

When the device is operated with the figures in different positions it will be seen that they will, by the operation of the lever 3, be brought into line, but that each figure in this movement will have received a different degree of force, and this, in addition to the element of friction hereinbefore described, will also act as a factor in determining the position at which a figure will stop.

It will be noted that the connection of the spring 19 with the lever 3 provides a device in which the force exerted by the spring on the lever is variable, the greatest amount being applied to the lever in its normal position of rest and this force being gradually decreased as the lever is swung on its pivot.

A special feature of my invention resides in so constructing the parts that each of the figures may have movement independently of the other figures, and it is obvious that this result may be attained in various ways without departing from the scope or intent of my invention, and I do not desire to limit myself to the exact means herein shown and described.

The bearings for the rings have been shown herein as plain cylindrical bearings; but it is obvious that any of the well-known forms of antifriction devices for permitting ease of movement of the rings may be employed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a toy, a support, a sectional bearing mounted on the support, each of the sections having a flange and abutting against another section, means for clamping the sections together, rings mounted on each of the sections between the flanges, each ring having movement independently of another ring, connections between the bearings and rings, and means for rotating the bearings.

2. In a toy, a supporting-post, a sectional bearing mounted on the post, each section having a flange, said sections abutting against each other, a nut fitting the screw-threaded surface of the post and clamping the sections together, a ring mounted on each of said sections between the flanges, a loose connection between each section and a ring, and means for rotating the bearing.

3. In a toy, a support and a bearing for an object mounted on the support, a swinging

lever to rotate said bearing, and a spring having a connection with and movable independently of said lever.

4. In a toy, a support, a plural number of rings rotatably mounted on the support, a swinging lever for rotating the rings, connections between the lever and rings, and a spring loosely connected with one end of the lever and movable lengthwise therealong.

5. In a toy, a support, a plural number of rings mounted on the support, a lever for rotating the rings, connections between the lever and rings, a spring, and a roller connected with one end of the spring and in engagement with the end of the lever.

6. In a toy, a support, a sectional bearing mounted on the support, means for clamping the bearings to the support, supports for objects mounted on said sectional bearings, connections between said bearings and device-supports for positively moving the latter in one direction but allowing uninterrupted movement in the opposite direction, and means for rotating the bearings.

7. In a toy, a post, sectional bearings mounted on the post, means for clamping the bearings and post together, supports for devices mounted on said bearings, connections between said bearings and device-supports for positively moving the latter in one direction but allowing uninterrupted movement in the opposite direction, and means for rotating said post.

8. In a toy, a post, a pinion rigidly secured thereto, a lever for rotating the pinion, bearings mounted on the post, means for clamping the bearings and post together, device-supports rotatably mounted on said bearings, and connections between said bearings and device-supports for moving the latter.

9. In a toy, a post rotatably mounted on a base, a pinion secured to the post, a lever for rotating the pinion, sectional bearings mounted on said post, a nut for clamping said bearings to the post and to each other, device-supports mounted on said bearings, and connections between said bearings and the device-supports for positively moving the latter in one direction, but allowing unobstructed movement in the opposite direction.

EDWARD J. NOBLE.

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