An operative toy of mechanical type for providing diversion to a child or person, the device consisting of a frame supporting a horizontal, freely rotatable shaft upon which there is rigidly attached a wheel or fly wheel, a pair of strings being attached to diametrically opposite sides of the shaft, the opposite ends of the strings each being attached to one end of a pull and recoil bar having a transverse central opening there through so to be fitted upon the shaft so that when the wheel and shaft are rotated, the strings wind up upon the shaft after which subsequently a pull of the bar along the axis of the shaft causes the shaft and wheel to rotate in an opposite direction, the device thus winding up the strings in the opposite direction so that the toy can be continued to operate with the wheel and shaft alternately rotating in opposite directions.
MECHANICAL TOY WHEEL

This invention relates generally to activity toys. A principal object of the present invention is to provide a novel mechanical toy wheel which fascinates young children and which is educational in view of that it teaches the principals of mechanical movements according to natural forces.

Another object of the present invention is to provide a mechanical toy wheel wherein a shaft and wheel are rotated alternately in opposite directions when a pull and recoil bar is slid along the shaft.

Still another object of the present invention is to provide a mechanical toy wheel which is safe for children, while in operation and which is different from any other existing toy.

Another purpose of the present invention is to provide a mechanical toy wheel wherein the wheel may incorporate a target upon one side thereof and again still which darts may be thrown so to achieve a score.

Still another purpose of the present invention is to provide a mechanical toy wheel wherein the circumferential edge could be divided into divisions each one of which is differently numbered so that wheel comes to a halt, a series of paddles around the edge brushing against a fixed pointer would stop the rotation and the pointer would indicate a winning number in the division stopped at the pointer.

Other objects of the present invention are to provide a mechanical toy wheel which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a perspective view of the present invention, and
FIG. 2 is a fragmentary side elevation view thereof shown in operative use.

Referring now to the drawing in detail, the reference numeral 10 represents a mechanical toy wheel according to the present invention wherein there is a stationary frame 11 made of plastic or any other desirable material, the frame 11 including a horizontal beam 12 which at its opposite ends is supported upon a pair of opposite diagonally downwardly extending legs 13. At one end of the beam 12 there is an upward post 14 where at the opposite end there is a pair of upward posts 15 and 16. A bearing opening 17 near the upper end of the post 14 is in axle alignment with an opening 18 along an intermediate portion of post 15 and an opening 19 in an intermediate portion of the post 16; the openings 17, 18 and 19 being adaptable to support rotatably free a horizontally extending shaft 20. Removable collars 21 may be secured to opposite ends of the shaft 20 so as to prevent the shaft from accidentally slipping out of the openings 17, 18 and 19.

A large wheel 22 is rigidly mounted upon the shaft 20, the wheel 22 being positioned between the posts 15 and 16. The upper ends of the posts 15 and 16 extend higher than the wheel so that the upper ends of the posts are bridged together by means of an interconnecting member 23.

A pair of strings 24 and 25 are at there one ends 26 attached to diametrically opposite sides of the shaft 20, the opposite ends of the strings each being secured to one end 27 of a pull and recoil bar 28 which at its center is provided with a transverse opening 29 there through and through which the shaft 20 is free receivable.

It will be noted that the ends 26 of the strings are located relatively close to the one end of the shaft 20 so that the rod 28 can be also fitted upon an opposite end portion of the shaft 20.

In operative use, in operating the toy, the wheel 22 is started to rotate in one direction so that the strings 24 and 25 become rotated upon the shaft and wrapped there around as shown in FIG. 2. When this happens, and a great amount of the strings are wound up upon the shaft, the wheel and shaft gradually come to a halt, after which a person simply gives a pull on the bar 20 into the direction as indicated by arrow 30 so that the pulling force by the strings cause the shaft and wheel to rotate in an opposite direction. This rotation continues until the strings become fully unwound immediately after which the strings wrap around the shaft in the opposite direction, this continuing until most of the strings are again wrapped around the shaft and the shaft and wheel gradually comes to a halt. The operator then again gives a pull in the direction as indicated by arrow 30 thus causing the wheel and shaft to rotate in the next opposite direction. The child or person can continue this over and over, thus continuing the toy to operate in subsequent opposite directions.

Thus there is provided a mechanical toy wheel that is educational and which provides fun.

In a modified design of the invention, the wheel may be made to be removable from the shaft 20, one side of the wheel being made of a soft material and upon which a target is imprinted and against which darts are thrown for attaining a score.

In a further modified design of the invention, the wheel maybe provided with soft plastic paddles along the peripheral edge thereof so as to brush across a fixed indicator pointer. The peripheral edge between the paddles maybe imprinted with various numerals, and when the wheel comes to a halt, that peripheral portion stopping at the pointer being declared the winning number.

Thus various modified forms of the invention maybe provided.

What I now claim is:

1. In a mechanical toy wheel, the combination of an upstanding frame of rigid plastic material or the like, said frame supporting a freely rotatable shaft and wheel, and means for rotating said wheel and shaft together in reciprocally opposite directions, said frame incorporating a horizontal beam which at its opposite ends is mounted upon a pair of oppositely downwardly diagonally extending legs, one end of said beam being integral with an upstanding post, the opposite end of said beam being integral with a pair of parallel, spaced apart upstanding posts, all of said posts being provided with a bearing, said bearings being in axial alignment with each other so that said shaft is supported rotatably free therewithin, said wheel being permanently affixed to said shaft, said wheel being located between said spaced-apart posts at one end of said horizontal beam, a pair of strings being secured at their one ends to diametrically opposite sides of said shaft, the opposite ends of said strings being secured to opposite sides of a transverse bar having a central opening through which...
said shaft is inserted, said bar being freely slideable along said shaft, and one side of said wheel being made of a soft material on which a target is imprinted and against which darts may be thrown for attaining a score.

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