June 9, 1953 A. J. CHARLES 2,641,083

WHEEL ACTUATED DISPLAY TOY

Filed May 9, 1952

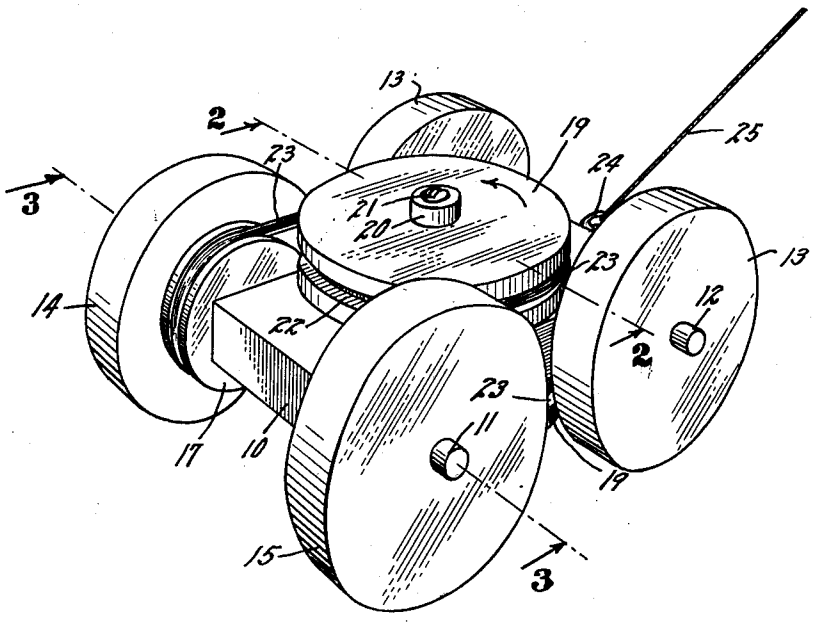


FIG. 1

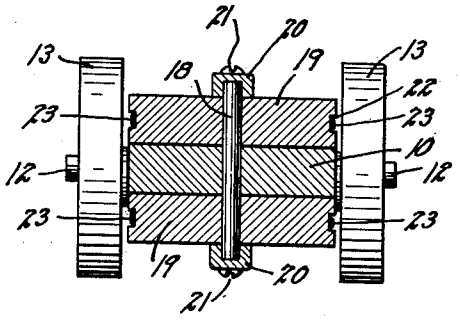


FIG. 2

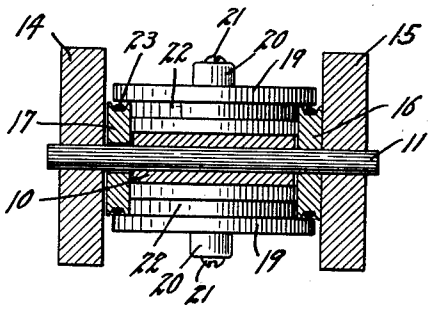


FIG. 3

INVENTOR.
ALFRED JOHN CHARLES
BY
ATTORNEY

Patented June 9, 1953

2,641,083

UNITED STATES PATENT OFFICE

2,641,083

WHEEL ACTUATED DISPLAY TOY

Alfred John Charles, Denver, Colo.

Application May 9, 1952, Serial No. 286,973

4 Claims. (Cl. 46—204)

1

This invention relates to a child's toy, and has for its principal object the provision of a simple, animated, wheeled toy which may be pulled along the floor, and which will display a plurality of attractive discs rotating in various directions in both horizontal and vertical planes, and to so construct the device that it may be inverted or stood on end or placed in any other position without affecting its operation.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a perspective view of the improved toy as it would appear in use;

Fig. 2 is a cross-section, taken on the line 2—2, Fig. 1; and

Fig. 3 is a similar cross-section, taken on the line 3—3, Fig. 1.

The improved toy comprises a flat, rectangular, elongated frame block 10 which is drilled adjacent its forward and rearward extremities to receive a rear axle member 11 and a front axle member 12. The axle members are positioned parallel to each other and are rotatably mounted in the block 10. Two front wheels 13 are fixedly mounted on the projecting extremities of the front axle member 12 so that they will rotate in unison as the toy is drawn along the floor. The toy may be provided with any suitable means for drawing or pushing it along the floor. As illustrated, it is provided with a screw eye 24 to which a draw cord 25 is attached.

A left rear wheel 14 is fixedly mounted on one extremity of the rear axle member 11, and a right rear wheel 15 is fixedly mounted on the other extremity of the rear axle 11. A drive pulley 16 is affixed concentrically to the inner face of the rear wheel 15, and an idler pulley 17 is rotatably mounted on the rear axle member 11 adjacent the rear wheel 14.

A vertical stub shaft 18 is fixedly mounted in and extends through the frame block 10, projecting above and below the latter intermediate the two axle members 11 and 12. Two display discs 19 are rotatably mounted on the projecting extremities of the stub shaft 18 and lie parallel to the upper and lower surfaces, respectively, of the frame block 10.

2

The display discs 19 are held in place in any desired manner, such as by means of retaining cap members 20 secured on the extremities of the stub shaft 18 by means of suitable attachment screws 21.

The drive pulley 16 and the idler pulley 17 are both formed with peripheral belt grooves, and the two display discs 19 are provided with similar peripheral, belt-receiving grooves 22. An endless flexible belt 23 is trained about the upper display disc 19, thence rearwardly and forwardly about both of the pulleys 16 and 17, thence about the lower display disc 19, so that all of the wheels and discs will rotate in unison.

It can be seen that when the cord 25 is drawn upon, all four of the wheels 13, 14, and 15 will rotate forwardly in unison, and that the upper display disc 19 will rotate in the direction of the arrow in Fig. 1 while the lower display disc rotates in the opposite direction. This is true regardless of which side of the toy is uppermost.

Should the child lift the forward portion of the toy from the floor by lifting on the cord, it will not affect the rotation of the various members, and regardless of how roughly the toy is handled by the child, it will always be in an operative position.

The various wheels and display discs may be suitably colored and ornamented to increase the attractiveness of the toy. An economical form of the device may be provided by forming the wheels, discs, and pulleys of wood and forming the axle members from wooden dowel stock. The wheels can then be forced to a force fit on the axle members and the stub shaft 18 can be a force fit in the frame block 10.

The terms "right," "left," "above," "upper," "lower," etc., as used herein, are simply for the purpose of describing the drawing. It is to be understood that the device may be completely inverted from the position shown without affecting its appearance or operation.

While a specific form of the improvement has been described and illustrated herein, it is to be understood that the same may be varied, within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

1. A wheeled toy comprising: a substantially horizontal frame block; a front and rear axle member passing through said frame block in substantially parallel relation; front wheel members mounted on said front axle member; rear wheel members mounted on said rear axle member; a drive pulley mounted on said rear axle member

and affixed to one of said rear wheels; an idler pulley mounted on said rear axle member adjacent the other rear wheel and being free to rotate independently of the latter; an upper disc rotatably mounted on the upper surface of said frame block; a lower disc rotatably mounted on the lower surface of said frame block; and an endless belt passing about both of said discs and about both of said pulleys.

2. A wheeled toy as described in claim 1 having a vertical shaft member extending through said frame block intermediate said axle member and projecting upwardly and downwardly therefrom and rotatably supporting said display discs.

3. A wheeled toy as described in claim 2 having

cap members on the extremities of said stub shaft for retaining said display discs thereon.

4. A wheeled toy as described in claim 3, said shaft member being fixedly mounted in said frame block, said front wheel members being fixedly mounted on said front axle, and said rear wheel members being fixedly mounted on said rear axle member.

ALFRED JOHN CHARLES.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,583,567	Becker	May 4, 1926