Jan. 22, 1924. 1,481,650

J. J. MURPHY

TOY CONSTRUCTION

Filed Dec. 2, 1920 3 Sheets-Sheet 1

FIG. 1.

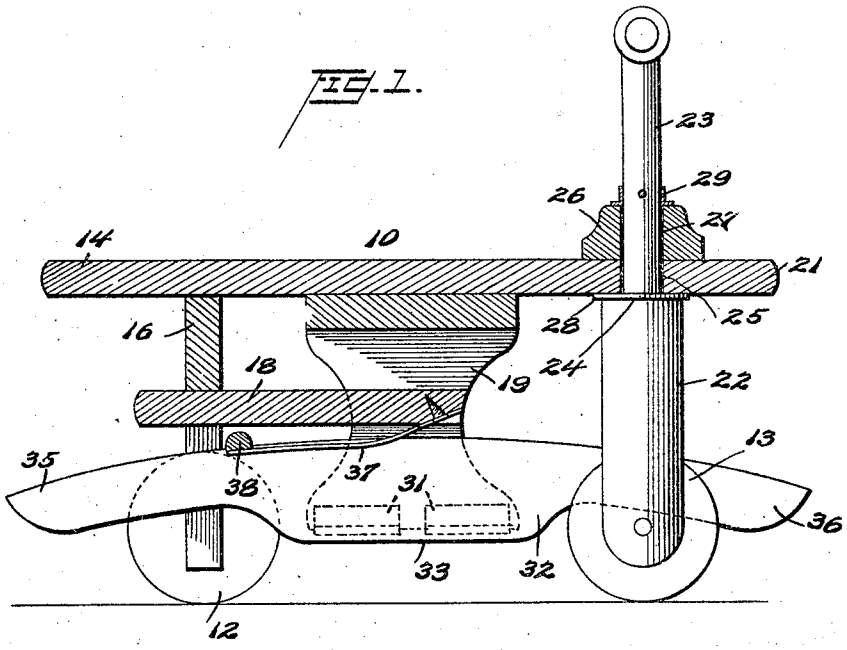
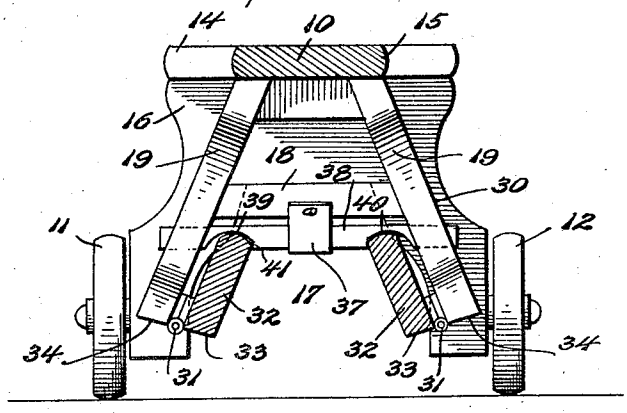


FIG. 2.



John J. Murphy

By William S. Throck

Atty

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J. J. MURPHY

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FIG. 3.

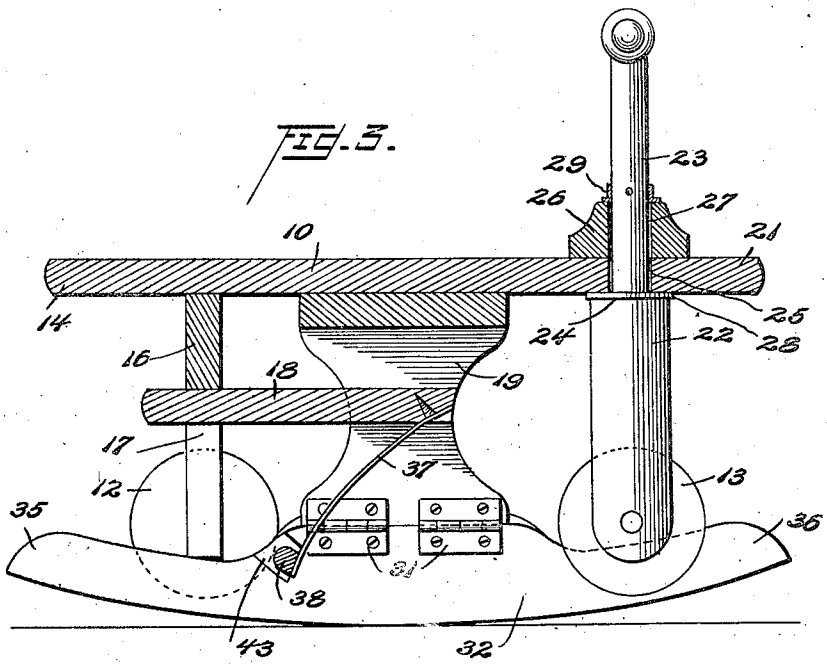
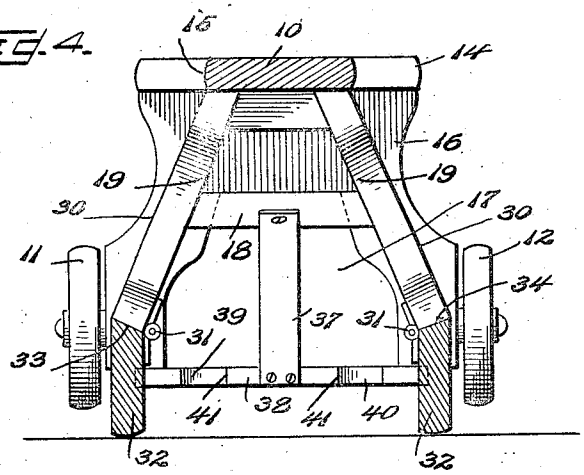


FIG. 4.



Inventor

John J. Murphy

By William S. Thrash

Atty

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J. J. MURPHY

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FIG. 5.

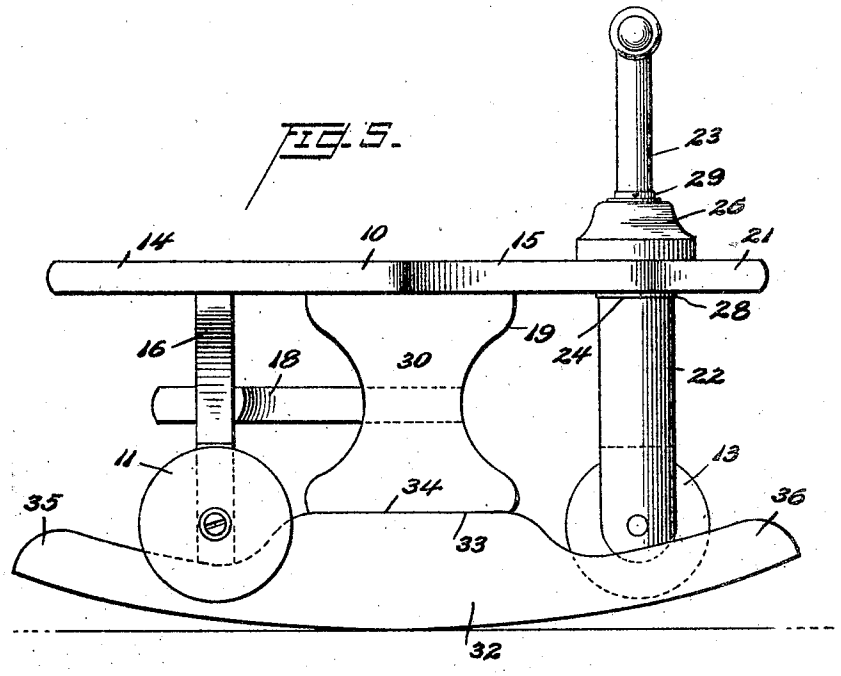
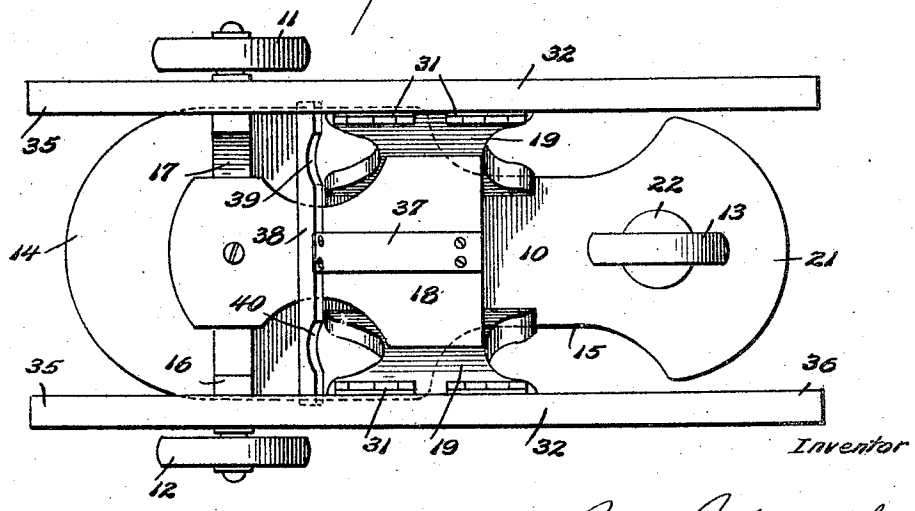


FIG. 6.



Inventor

John J. Murphy

By William S. Thirsk

Atty

Patented Jan. 22, 1924. 1,481,650

UNITED STATES PATENT OFFICE.

JOHN J. MURPHY, OF NORWICH, CONNECTICUT.

TOY CONSTRUCTION.

Application filed December 2, 1920. Serial No. 427,736.

To all whom it may concern:

Be it known that I, JOHN J. MURPHY, a citizen of the United States, and resident of Norwich, in the county of New London, State of Connecticut, have invented certain new and useful Improvements in Toy Constructions, of which the following is a specification.

My present invention relates to devices supported from a fixed base such as the ground and arranged to support a user, and motion to which is given by the user from his position of support on the device.

Although my device is particularly intended and is described as a toy to be used by childern, it is obvious that it has a wider field of usefulness in other relations.

Among the objects of my invention are the provision of a vehicle toy of the wheeled pusher type which will be strong, durable and yet simple in construction; the provision of an improved toy of the rocking type; the provision of a toy of the wheeled pusher type which is convertible into one of the rocking type; the provision in a toy of one type, of means movable into and out of position for converting said toy into one of another type; and the provision of locking mechanism for securing said movable means in their different positions of movement.

In attaining the aforegoing objects, certain additional benefits and advantages, which will hereinbelow appear, I have provided a structure, one embodiment of which is illustrated in the accompanying drawings, wherein,—

Figure 1 is a longitudinal section of a construction embodying my invention.

Figure 2 is a transverse section looking rearwardly thereof, looking upwardly.

Figure 3 is a longitudinal central section taken through Fig. 1, and

Figure 4 is a transverse section through Fig. 1, taken at right angles to that of Fig. 3.

Fig. 5, is a side elevation showing the rockers in extended position.

Fig. 5, is a side elevation showing the rockers in extended position.

Referring first to Fig. 1 of the drawing, it will be noted that my construction is generally a toy of the wheeled type in which the platform 10 is supported from the ground by the wheels 11, 12 and 13. Although I have illustrated a construction of the three wheel type, it is obvious that the number of the wheels may be varied at will in carrying out the objects of my invention. Furthermore, in the construction disclosed, the platform 10 is shown so designed as to conveniently receive a person, particularly a child in seated position, the objects of my invention could be equally well carried into effect, if this platform 10 was constructed and arranged to receive the rider or user in any other manner.

For purposes of convenience, this seat 10 is made widest at the rear 14, the seat 10 being cut away at 15, to comfortably receive the knee portions of the lower limbs and is suported from the wheels by the following construction.

Secured to the under side of the platform 10 toward the rear end thereof is the vertically extending and transversely positioned member 16 cut away as shown at 17 intermediate its sides for the purposes to be set forth hereinafter, and having the wheels 11 and 12 rotatably secured to the lower ends thereof in any desired manner, preferably by means of wood screws. For bracing this supporting member 16 the member 18 has one end secured to the side and top walls at the upper part of the cut out 17 and extends longitudinally of the platform and has its other end secured to the members 19, which are in turn secured to the lower surface of the platform 10. I have thus provided a construction whereby the member 16 which in fact forms the main support for the rear end of the platform 10, and thus carries the full weight of the user, is securely braced against collapse.

The front end 21 of the platform 10 is supported in position by the steering post 22 to the lower end of which is rotatably secured the front supporting and steering wheel 13, and to the upper end of which is secured the steering handle 15. The steering post 22 is reduced in diameter at 23 to provide the wide circular supporting shoulder 24 upon which the front end 21 of the platform 10 rests. The platform 10 is provided with the guide opening or passage 25 through which the reduced portion 23 of the rod 22 loosely passes. To further guide the portion 23 and to form a relatively long bearing therefor, the platform 10 is provided with the boss 26, the passage 27 through which, forms substantially a continuation of the passage 25 through the platform 10. Seated upon the shoulder 24 is a metal washer 28 and secured to the reduced por-

tion 23 is the limiting collar 29. The steering post is thus secured to the platform to permit of its free rotation while it is held against bodily movement relatively thereto.

It will be seen that I have thus produced a strong, durable and yet simple three wheeled vehicle toy which serves the objects enumerated.

The type of vehicle toy thus far described is generally intended only for out door use and then only on surfaces of a character where the device can be readily propelled with little exertion. Its indoor use is obviously objectionable and limited, as is also its use on soft or rough ground. By the construction which I have devised, and which I am now about to describe, not only are these objections and limitations to the use of the toy removed, but the character thereof can be changed from the wheeled type thus far described to a rocking type now to be described.

As is clearly shown in Fig. 4, the members 19 previously described are arranged at an angle to the platform 10, diverging downwardly therefrom, and terminating at a substantial distance above the lower end of the wheels 11, 12 and 13, so as not to interfere with the use of the device as a wheeled toy. In addition to other obvious advantages of this arrangement of the members 19, one of which will be shortly pointed out, this diverging arrangement permits of securing the members 19 to the narrowed part of the platform while at the same time the enlarged bracing element 18 can be used in view of the greater distance between the members 19 further down. Furthermore, the sloping sides 30 thus secured act as guides and fulcrum members for the legs in the act of propelling the vehicle.

Pivotally secured to the lower ends of the members 19 in any desired manner, preferably by means of hinge members 31, are the rocker arms 32. The hinges 31 as will be seen from Fig. 3 are preferably constructed and arranged so that the rocker arms 32 swing inwardly and upwardly from their fully extended position shown in Figs. 1, 2 and 4. The depth of the rocker arms 32 is such that when they are in their fully extended position, as clearly shown in Fig. 4, they form in fact a continuation of the members 19, the combined depth of each member 19 and the attached rocker arm 32 being greater than the distance of the wheeled bottom from the platform. When therefore, these rocker arms 32 are moved to their extended position, as described, the wheels 11, 12 and 13 will be raised from the ground and the vehicle converted from a toy of the wheeled type to one of the rocking type.

The rocker arms 32 are limited in their inward and aforesaid collapsed position by their engagement with the inside surface of the members 19 and in their movement to their downward, extended or operative position by the engagement of their upper surfaces 33 with the lower surfaces 34 of the members 19. The angle of these surfaces 33 and 34 to the horizontal is such that the angle of divergence of the rocker arms 32 is reduced to a minimum.

In the embodiment illustrated, I have shown the rocker arms as moved inwardly and upwardly to inoperative position. One of the advantages of this arrangement is that these arms 32 are thus moved into a position where they will not interfere in any way with the use of the device as a wheeled toy, and particularly will not interfere with the legs of the user, while acting as the propelling means. It is however obvious that the main objects of my invention can be substantially secured by having these rocker arms 32 moved in any desired direction or into any desired position.

The rocker arms 32 are constructed and arranged so that when in folded or collapsed position their ends 35 and 36 extend a substantial distance beyond the points of engagement of the wheels 12, 13 and 14 with the ground, and in the form illustrated they are made to extend beyond the ends of the platform or seat 10. I have thus provided stops to prevent the vehicle tilting too far backwardly which is an ever source of danger in constructions of this character. Furthermore, by having these ends low, the angle of the tilt is still further reduced.

To retain these rocker arms in their inoperative or folded position there is provided a flat spring 37 which has one end secured to the bracing member 18. This flat spring 37 is bowed as shown and has a cross member 38 secured to its other end. The spring 37 is so arranged and constructed as to normally tend to position the member 38 below the hinge members 31, the member 38 being of a length to be engaged by the rocker arms 32 when they are swung upwardly into their inoperative or folded position. When, therefore, the rocker arms 32 are swung upwardly as aforementioned, they will act to push the member 38 upwardly and as the action of the rocker arms 32 is a balanced one on both sides of the spring 37, an efficient operation is secured. When the members 32 are swung upwardly to folded position, they will each wipe across the lower surface of the member 38 in an outward direction, until the cut away portions 39 and 40 are reached, when a locking engagement between the rocker arms 32 and the member 38 is secured, due to the engagement of the squared shoulders 41 of the cut away portions 39 and 40 with the adjacent sides of the rocker arms 32. When it is desired to release these arms 32 so as to permit of these being moved to their lowered extended position, the member

38 is pushed upwardly in the direction of the platform 10, out of engagement with said arms 32.

As clearly shown in Figures 3, 4 and 6, the surfaces of the arms 32 to which the hinges are secured are provided with terminal slots or grooves 43 which are so constructed and positioned that when the rocker arms are fully extended as shown in Fig. 4 the ends of the member 38 will enter therein and lock the rocker members in their extended or operative position.

I have thus provided a simple construction for automatically locking the rocker arms 32 in both limits of their movement.

Although I have described the members 32 as rocker arms of the type generally found in connection with rocking chairs and hobby horses, it is obvious that these members could be made to serve equally well as runners for a sled and for other similar purposes. I have illustrated these members 32 as curved as shown as they thus best serve the particular purposes described.

Having thus described one embodiment of my invention, what I particularly desire to claim and secure by Letters Patent is:

1. In a device of the character described, a platform, a group of wheeled supporting members and a group of rocker supporting members, said wheeled supporting members being united to the platform at points adjacent the extremities thereof, and said rocker supporting members being united to the platform at points adjacent the longitudinal center thereof.

2. In a combined wheel and rocker toy, wheeled supports and rocker supports, said rocker supports foldable above and extensible below the lower extremities of said wheeled supports, and spring means for positively locking said rocker supports in both folded and extended positions.

Signed at Norwich, in the county of New London, State of Connecticut, this 11th day of October, A. D. 1920.

JOHN J. MURPHY.