B. J. DISCHER.

TOY VEHICLE.

APPLICATION FILED MAY 9, 1918.

1,313,470.

Patented Aug. 19, 1919.

3 SHEETS—SHEET 1.

FIG. 1.

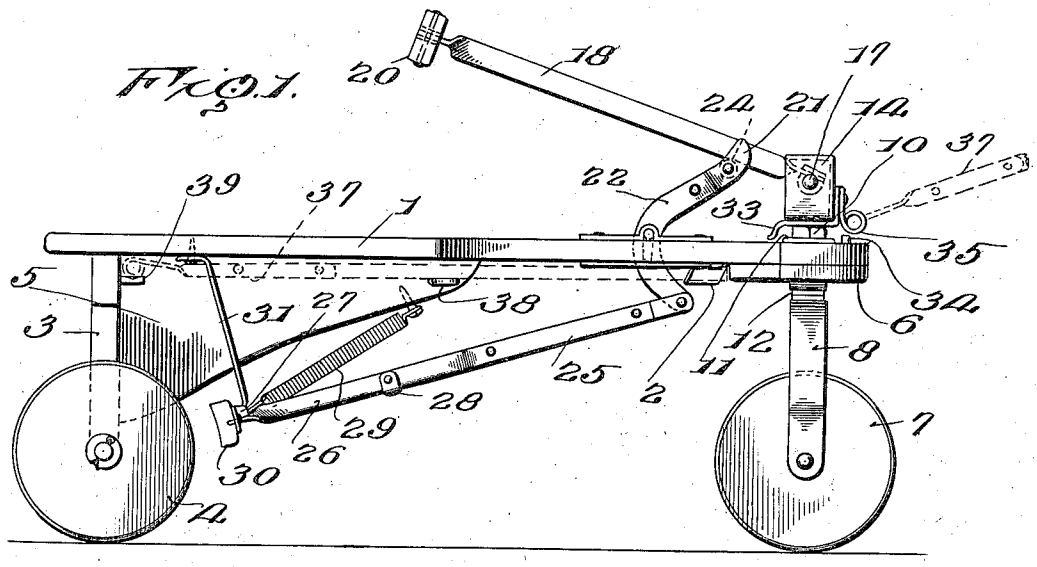
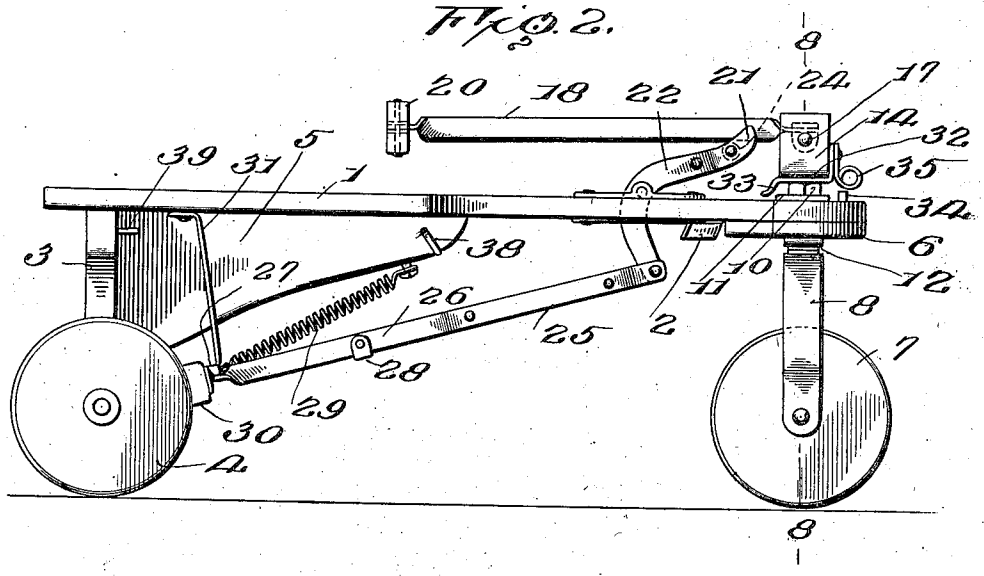


FIG. 2.



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3 SHEETS—SHEET 2.

FIG. 3.

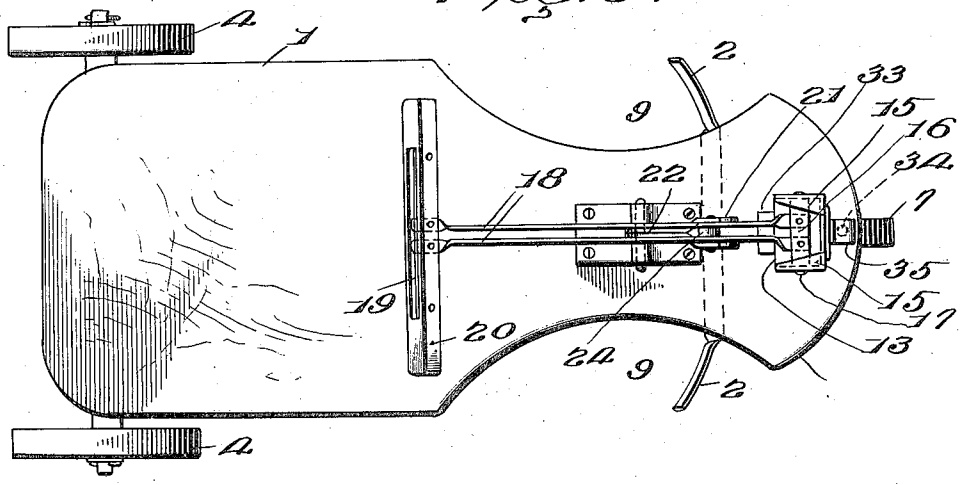


FIG. 4.

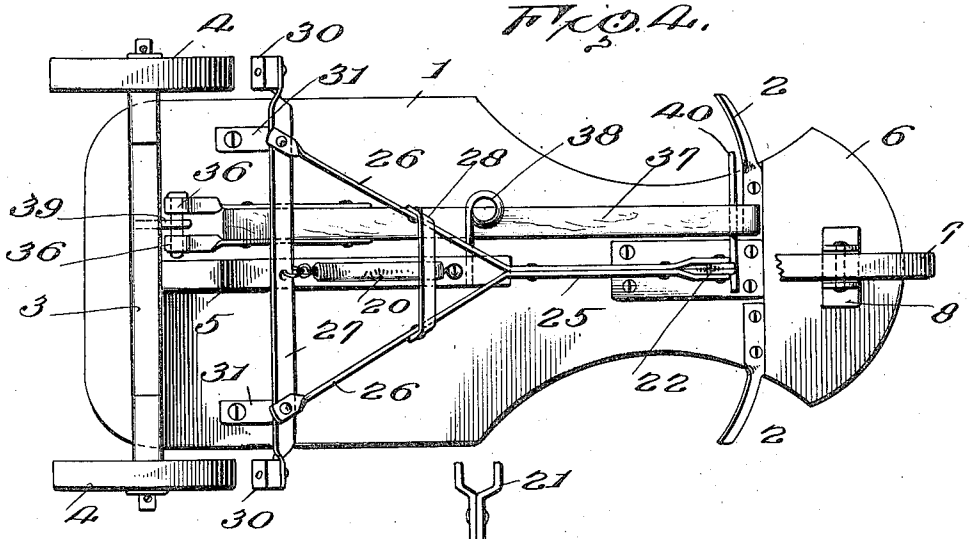
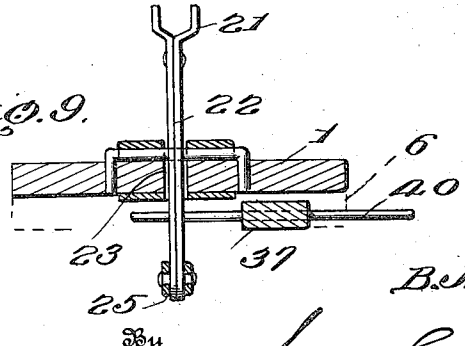


FIG. 9.



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3 SHEETS—SHEET 3.

FIG. 5.

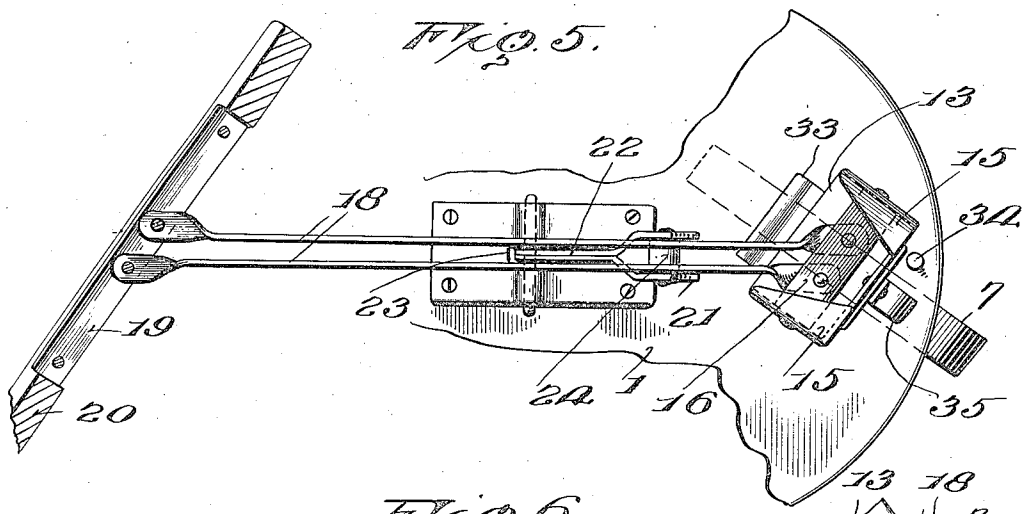


FIG. 6.

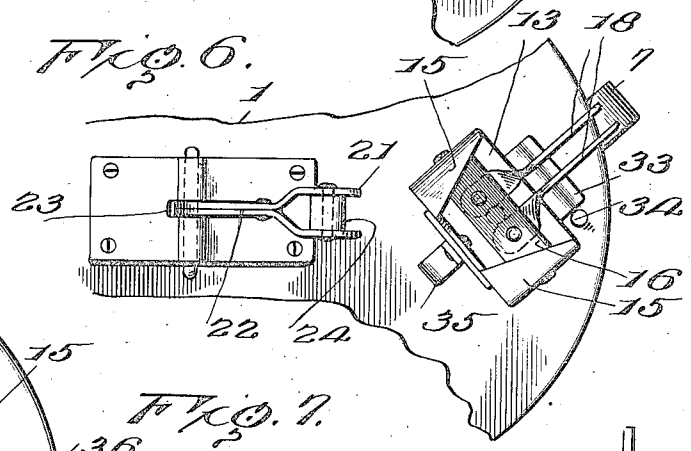


FIG. 7.

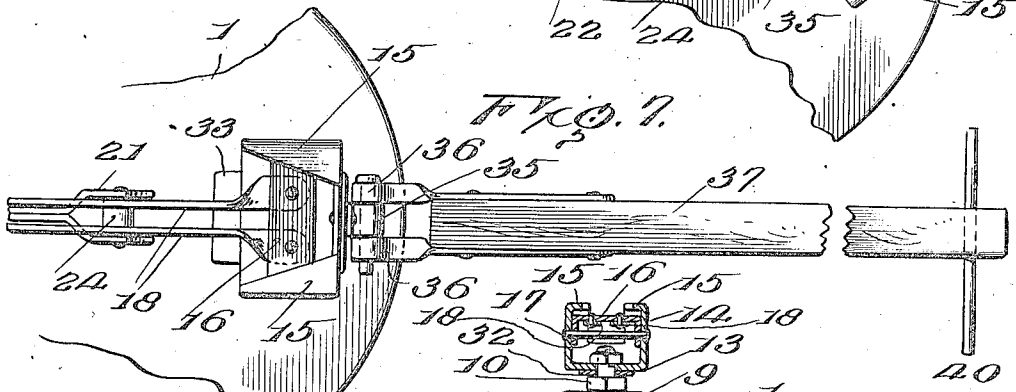
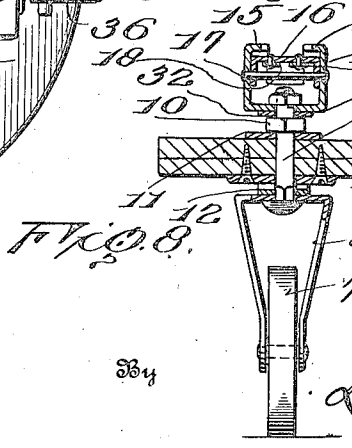


FIG. 8.



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UNITED STATES PATENT OFFICE.

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TOY VEHICLE.

1,313,470. Specification of Letters Patent. Patented Aug. 19, 1919.

Application filed May 9, 1918. Serial No. 233,504.

To all whom it may concern:

Be it known that I, BERT J. DISCHER, a citizen of the United States, residing at Flint, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Toy Vehicles, of which the following is a specification.

This invention has for its object the provision of a cheap, strong, durable coaster which may be easily steered and which may be stopped at any time by the child using it without the necessity of dragging the feet upon the ground. A further object of the invention is to provide means whereby the vehicle may be steered without requiring the child to lean to one side, and a still further object of the invention is to provide means whereby the vehicle may be pulled when desired.

The several stated objects and such other objects as will incidentally appear in the course of the following description are attained in such a device as is illustrated in the accompanying drawings, and the invention resides in certain novel features which will be particularly pointed out in the claims following the description.

In the drawings:

Figures 1 and 2 are side elevations of my improved vehicle, Fig. 1 showing the brake released and Fig. 2 showing the brake applied;

Fig. 3 is a plan view of the vehicle;

Fig. 4 is a bottom plan view;

Fig. 5 is an enlarged plan view, partly in section, of the steering mechanism;

Fig. 6 is a plan view of a portion of the device;

Fig. 7 is a similar view showing a supplemental handle or draw bar applied to the vehicle;

Fig. 8 is a section on the line 8—8 of Fig. 2;

Fig. 9 is a detail section on the line 9—9 of Fig. 3.

In carrying out my invention, I employ a platform or seat 1 which is reduced at its sides at its front end so that a child seated upon the rear portion of the platform may readily reach the foot rest 2 secured to the under side of the platform near the front end thereof and projecting laterally therefrom. To the rear end of the platform on the under side of the same I secure a bolster 3, and upon the said bolster at the ends thereof are wheels 4. These wheels 4 may be mounted upon spindles secured to or formed on the ends of the bolster, or may be carried by an axle mounted in any convenient manner upon the bolster. It will also be understood that the particular type of wheels employed is immaterial and they may be wooden disks or metallic wheels and may be equipped with tires of any desired type. Anti-friction bearings may be provided if desired in order to facilitate the easy travel of the vehicle. A brace 5 is secured to the bolster and the platform and extends longitudinally of the platform at the center thereof, as shown most clearly in Fig. 4, a very strong construction being thus provided.

The front end of the platform may be reinforced by a block 6 secured to the under side thereof and corresponding in shape to the platform. This end of the platform is supported by a caster or roller 7 which is mounted in the lower end of a fork 8, the upper end or shoulder of the fork being fixed to the lower end of a king bolt 9 which extends up through the platform and is held against withdrawal therefrom by a nut or other retaining device 10 secured upon the bolt and bearing upon a washer or wear plate 11. A fifth wheel or turntable 12 is interposed between the under side of the reinforcement 6 and the head of the fork 8 so as to reduce wear between the parts as well as to strengthen the same and insure easy turning of the fork. A steering head 13 is secured to the upper end of the king bolt and this steering head consists of an open frame having a bottom plate through which the upper end of the king bolt extends, side plates rising from the ends of the bottom plate and overhanging flanges at the upper edges of the side plates. The side plates are designated 14 and the overhanging flanges 15. It will be readily noted from Figs. 5, 6 and 7 that the flanges 15 have their inner edges diverging toward the rear of the vehicle when the head is in its normal position. Between the side plates and below the flanges is secured a yoke 16 having its ends fitting against the side plates of the steering head so that lateral movement of the yoke relative to the steering head cannot occur. The pin or bolt 17, however, by which the yoke is secured in the steering head, forms a pivot to permit oscillatory movement of the yoke in a vertical plane, and this movement of the yoke per-

mits the child to raise and lower the steering handle so as to apply the brakes or release the same as will presently appear. The steering device comprises a pair of parallel bars 18 having their front ends pivoted to the under side of the yoke 16, as shown in Figs. 5, 6 and 7, and their rear ends pivoted to and between wear plates 19 which are secured in longitudinal recesses formed in the steering handle 20. The steering bars 18 constitute links connecting the handle 20 with the yoke 16 so that the said handle and yoke will always be parallel and, therefore, if the handle be turned to a position oblique to the longitudinal axis of the platform, the yoke 16 and the steering head will be likewise turned and the caster or steering wheel 7 will be caused to travel at an angle and thereby direct the vehicle to one side. The steering bars or links are held normally against sidewise or lateral movement by the fork or keeper 21 at the upper end of the brake lever 22 which is pivotally mounted on the platform and extends through a longitudinal slot 23 therein. A roller 24 is fitted in and carried by the sides of the fork 21 so as to reduce the frictional wear upon the steering bars or links, as will be readily understood. The lower end of the brake lever is pivoted to the forward end of a connecting bar 25 which extends rearwardly below the platform and has branches 26 in its rear portion secured to and carrying the brake beam 27. A brace 28 spans the branches 26 so as to prevent spreading of the same, and a spring 29 is secured to the brake beam and to the brace 5 or the under side of the platform and tends normally to hold the brake shoes 30, which are carried by the ends of the brake beam, away from the wheels. Hangers 31 have their upper ends attached to the under side of the platform near the sides of the same and their lower ends secured to the brake beam so as to support the same. These hangers will preferably be of resilient material, but they may be of any other desired material and so attached to the platform that they may readily rock relative thereto.

At the under side of the steering head 13 I secure upon the king bolt a check plate 32 which has its rear end extending downwardly, as shown at 33, whereby it may be caused to bear upon the upper side of the platform to prevent bending or breaking strain being exerted upon the steering head by pressure exerted through the steering handle and links. This stop or check plate 33 also prevents the steering head being completely reversed, by engaging a pin or other projection 34 on the upper side of the platform in advance of the steering head. Upon the front side of the steering head I provide an eye or loop 35 to which may be fitted cooperating eyes 36 at the rear end of a handle or tongue 37 which is supported upon the under side of the platform by a keeper 38 inserted laterally into the brace 5 and a pin or equivalent device 39 projecting from the bolster 3. This handle or tongue 37 will be equipped with a cross-rod 40 at its front end so that it may be conveniently grasped.

The vehicle is intended primarily as a coasting device and for such purpose the child will be seated upon the platform and will place its feet upon the foot rests 2. The links 18 will pass through the fork 21 as shown in Fig. 1, and will extend slightly upwardly and rearwardly therefrom. Should it be desired to deviate from a straight path the child will merely push forward upon one end of the handle 20 so that it will assume the position shown in Fig. 5, and this motion of the handle will be transmitted through the links 18 to the steering head so as to dispose the steering wheel at an angle as shown in said figure. Should it be desired to stop the vehicle the rider merely presses down upon the handle 20 thereby causing the upper end of the brake lever to swing downwardly and forwardly so that the rear end thereof will be swung downwardly and rearwardly and the brake shoes consequently moved against the rear wheels 4. These positions of the parts are clearly shown in Figs. 1 and 2. When the child reaches the foot of the hill and desires to regain the top, the handle 20 is swung over to a position in advance of the platform and the links 18 will then extend over the front edge of the steering head in line with the platform so that the vehicle may be readily drawn up hill. When a second coasting trip is to start, the handle will be returned to its normal position, and the vehicle cannot be steered while the links 18 and the handle are inverted for the reason that in such position the check or stop 33 will be brought against the pin 34, as clearly shown in Fig. 6.

From the foregoing description taken in connection with the accompanying drawings it will be seen that I have provided an exceedingly simple and inexpensive device which will be strong and durable. The brake may be easily operated and the vehicle readily steered without putting any strain upon the child using the same, and it will not be necessary for the child to drag its feet in order to stop the vehicle so that the danger of injury to the child as well as wear upon the shoes is overcome.

Having thus described the invention, what is claimed as new is:

1. In a toy vehicle, the combination of a platform, traveling supports for the platform, resilient hangers secured to the platform near the rear end thereof, a brake beam carried by the lower ends of said hangers, brake shoes carried by said beam, a

spring having its rear end secured to the brake beam and its forward end secured to the platform and holding the brake beam normally retracted, a brake lever mounted upon the platform, connections between the said lever and the brake beam, and means for operating the brake lever.

2. In a toy vehicle, the combination of a platform, wheels supporting the rear end of the platform, a steering wheel supporting the front end of the platform, a brake adapted to bear upon the rear wheels, a brake lever mounted upon the platform, connections between said lever and the brake, the upper end of the brake lever being constructed with a fork, a steering device comprising longitudinally movable links passing through said fork, and operative connections between said links and the steering wheel, the links remaining parallel to the plane passing through the longitudinal axis of the vehicle while turning the steering wheel support about its vertical axis whereby the steering links may remain in the fork of the brake lever and at the same time steer the vehicle.

3. In a toy vehicle, the combination of a platform, wheels supporting the rear end of the platform, a steering wheel supporting the front end of the platform, a steering head connected with said steering wheel, a handle, parallel links having their rear ends pivoted to said handle and their front ends pivoted to the steering head, and a support for said links engaging the same so as to prevent lateral movement thereof.

4. In a toy vehicle, the combination of a platform, a steering wheel mounted at the front end of the platform, a steering head above the platform connected with said steering wheel, a yoke pivotally secured within the steering head for movement in a vertical plane, a steering handle, parallel links having their rear ends pivoted to said handle and their front ends pivoted to said yoke, and a support for said links preventing lateral movement of the same.

5. In a toy vehicle, the combination of a platform, a traveling support for the rear end thereof, a king bolt rotatably mounted in the front end of the platform, a traveling support connected with the lower end of the king bolt, a steering head secured to the upper head of the king bolt and consisting of an open frame having inwardly projecting over hanging flanges at its sides, the edges of said flanges diverging rearwardly, a yoke pivoted within the steering head for movement in a vertical plane and held against relative horizontal movement by the steering head, and steering members attached to said yoke.

6. In a toy vehicle, the combination of a platform, a steering wheel supporting the front end of the platform, a steering head connected with said steering wheel, a handle, and connections between the handle and the steering head comprising elements movable longitudinally of the platform in rectilinear paths whereby the steering head may be turned relative to the platform without shifting the handle laterally.

In testimony whereof I affix my signature.

BERT J. DISCHER. [L. S.]