

Sept. 13, 1927.

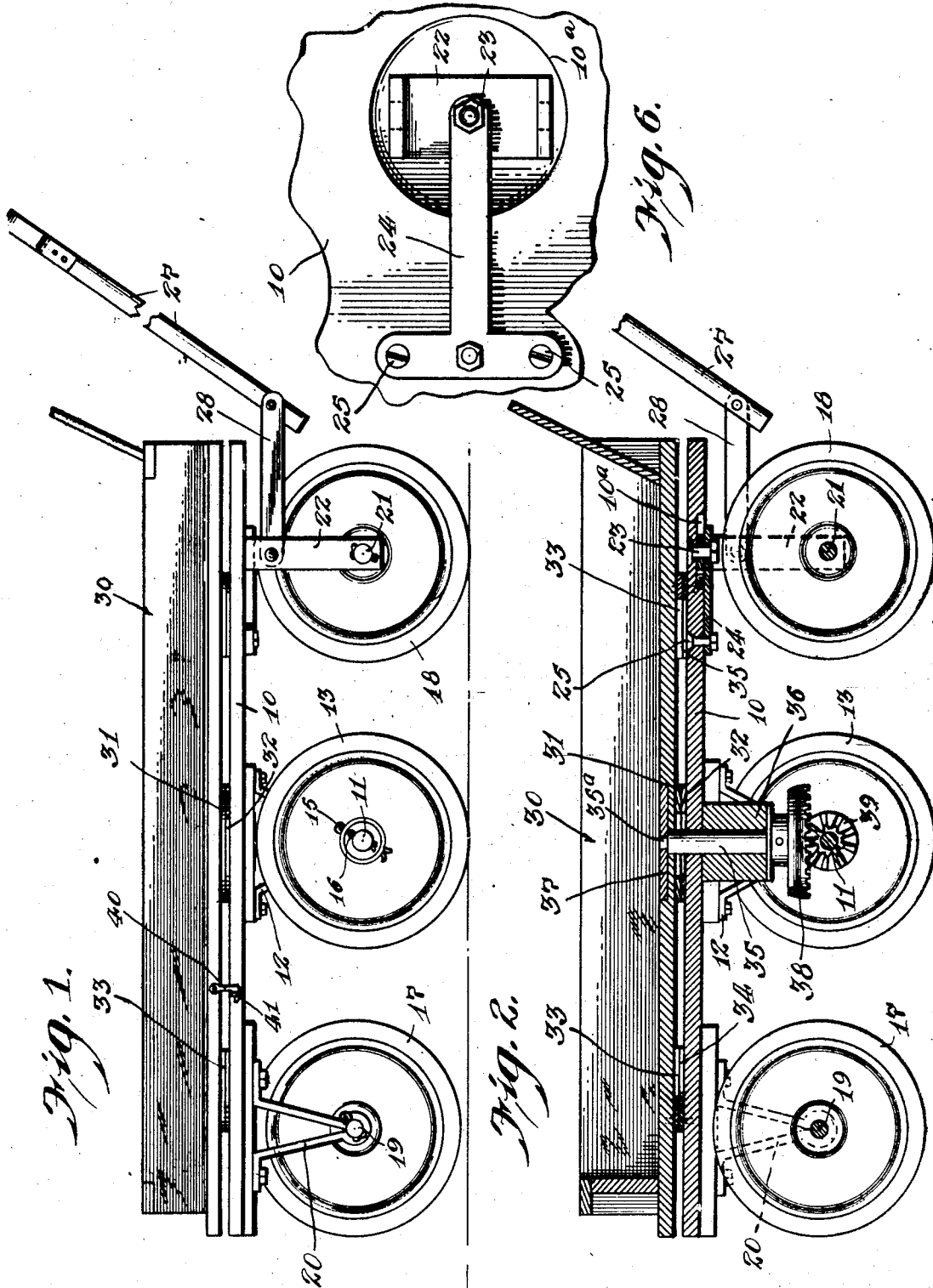
1,642,591

C. E. MORRIS

TOY WAGON

Filed Aug. 13, 1924

2 Sheets-Sheet 1



WITNESSES
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INVENTOR
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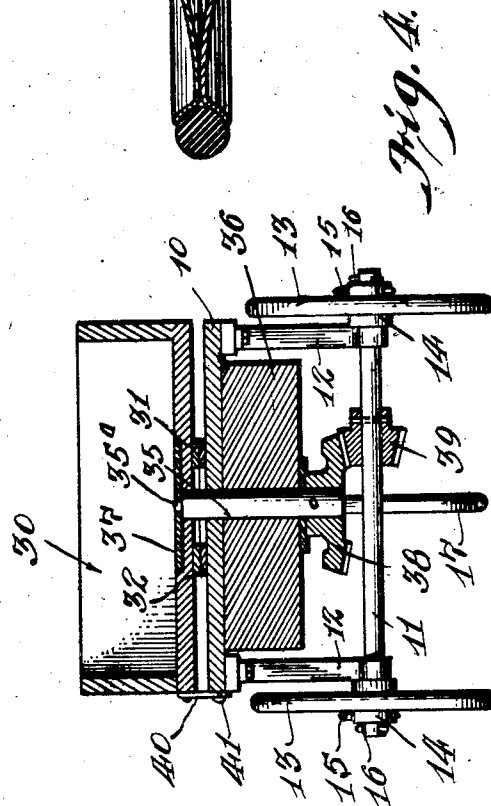
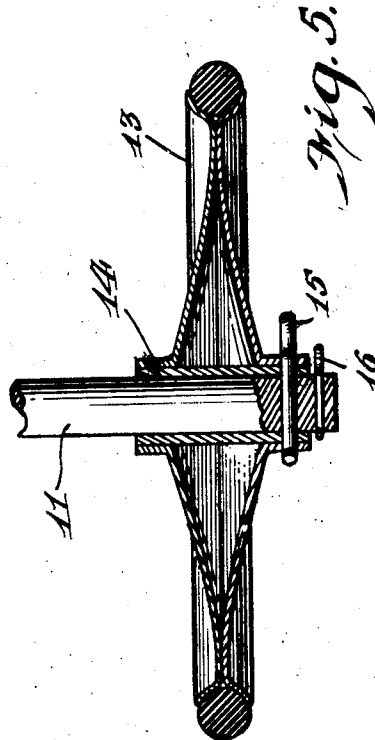
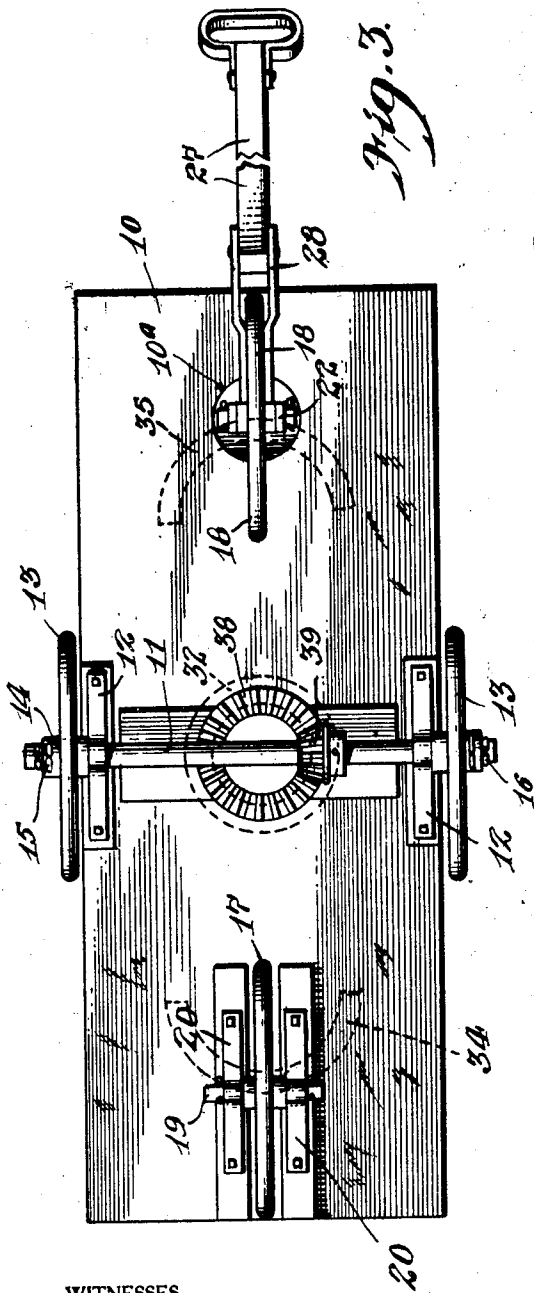
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WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES E. MORRIS, OF PHILADELPHIA, PENNSYLVANIA.

TOY WAGON.

Application filed August 13, 1924. Serial No. 731,807.

This invention relates to toy wagons and is designed for the use of small children.

The object of the invention is to provide a toy wagon of this character wherein the body of the wagon is revolved from the ground wheels when the wagon is drawn along the pavement or roadway whereby a more exhilarating and amusing experience is provided for the child riding in the wagon.

A further object of the invention is to provide a wagon of this character having the advantage and capacity enumerated and which may also be readily and easily converted into a wagon of the ordinary type wherein the body of the wagon remains substantially stationary with respect to the running gear thereof.

A further object is to provide a wagon of the character mentioned and which is also of simple and durable construction, reliable in operation and easy and comparatively inexpensive to manufacture.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts which will be hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawing forming a part of this specification, in which:

Figure 1 is a view in side elevation showing a toy wagon embodying my invention,

Figure 2 is a view of the wagon in central longitudinal vertical section,

Figure 3 is a view of the wagon in bottom plan,

Figure 4 is a view of the wagon in central transverse vertical section,

Figure 5 is a detail view partly in section and partly in elevation showing the manner in which the ground wheels are releasably secured to the driving axle, and

Figure 6 is a fragmentary view in bottom plan of the steering wheel mounting.

Referring to the drawings the numeral 10 designates a fixed platform which is directly supported upon the running gear of the wagon. The running gear of the wagon includes a driving axle 11 rotatably mounted in bearing brackets 12 which are secured to and depend from the underside of the platform 10. The axle 11 is located midway between the ends and carries a pair of ground wheels 13. The ground wheels 13 may be of the disc type as shown in Fig. 5

and have hubs 14 which rotatably fit on the axle 11.

Means is provided for releasably securing the wheels 13 to the axle 11 and in the embodiment illustrated comprises cotter pins 15 inserted in aligned openings in the hubs 14 of the wheels 13 and in the axle 11.

Endwise displacement of the axle 11 is prevented by virtue of the fact that the inner ends of the hubs 14 of the wheels 13 abut the bearing brackets 12 and by virtue of the provision of cotter pins 16 which are inserted in openings provided in the ends of the axle and which are engageable with the outer ends of the hubs 14. This same arrangement also prevents endwise displacement of the wheels 13 when the cotter pins 15 have been removed. Obviously various other expedients well known to those skilled in the art may be utilized for this purpose.

In addition to the ground wheels 13 a ground wheel 17 is provided at the rear of the platform and a steering wheel 18 is provided at the forward end of the platform. The plane of the wheel 17 lies in the longitudinal axis of the platform 10 and so does the plane of the wheel 18 when the same is positioned to maintain a straight away course.

The wheel 17 may also be of the disc type and is mounted on an axle 19 rotatably fitted in bearing brackets 20 secured to and depending from the underside of the platform 10.

The steering wheel 18 which may be of the disc type is mounted on an axle 21 which is rotatably fitted in bearings provided therefor in an inverted U-shaped hanger 22. The hanger 22 has its body portion pivoted, as at 23, to the underside of the platform 10 whereby the hanger and the steering wheel are mounted for rotation about a vertical axis. Of course the steering wheel is also rotatable on the hanger about a horizontal axis. The body portion of the hanger operates in a circular recess 24 provided in the underside of the platform 10 and this hanger is held in operative relation with respect to the platform by means of the pivot bolt 23 and a supporting plate 24 held in position by the action of the pivot bolt 23 and by fastening means 25 (see Fig. 6).

A handle 27 is provided and is connected by links 28 with the hanger 22 of the front steering wheel. The handle 27 may be

utilized to control the steering of the vehicle and also to pull the vehicle along.

A wagon body 30 is mounted on the platform 10 by means of an annular bearing plate 31 fastened to the bottom of the wagon body and resting on a similar bearing plate 32 fastened to the top of the platform 10 and also by means of arcuate bearing strips 33 fastened to the bottom of the wagon body adjacent its ends and resting on similar bearing strips 34 provided on the top of the platform 10. In all positions of the wagon body the plates 31 and 32 coact to support the same but the arcuate strips 33 and 34 partake in the supporting action only when the wagon body is centered on the platform directly over the running gear after the manner of the ordinary wagon body.

A vertical shaft 35 is journaled in a bearing provided therefor in the platform 10, and also in a bearing provided therefor in a bearing block 36 fastened to the underside of the platform and the upper end of this shaft is loosely fitted in the openings of the plates 31 and 32 and extends up through the bottom of the wagon body to which it is secured by means of an attaching plate 37, the attaching plate 37 being of polygonal form and having a polygonal opening in its center receiving a reduced and polygonal extension 35* of the shaft 35. Of course, the major portion of the shaft 35 is round. As shown in Fig. 2 the plate 37 is countersunk in the bottom of the wagon.

Means is provided for driving the shaft 35 from the axle 11 when the same is rotated by the ground wheel. Of course, any suitable motion transmission means may be provided for this purpose. In the embodiment shown a large bevel gear 38 is fixed to the lower end of the shaft 35 and meshes with a bevelled pinion 39 fixed to the axle 11.

With this arrangement when the vehicle is drawn along and the wheels 13 are fixed to the axle 11 by means of the cotter pins 15, the rotation of the ground wheels 13 will be imparted to the shaft 35 through the pinions 39 and 38 and from the shaft 35 the body 30 of the wagon will be turned or revolved about its central vertical axis while the wagon as a whole moves along the ground. This provides for a novel, en-

tertaining and exhilarating form of amusement.

The wagon may be used as an ordinary toy wagon wherein the body maintains a fixed relation with respect to the platform 10 and with respect to the running gear, and in order to convert the revolving body into a fixed body it is necessary only to pull out the cotter pins 15 whereby to let the wheels 13 run free on the axle 11. With the wheels running free on the axle 11 the axle is not driven but remains fixed and consequently the gears 38 and 39, the shaft 35 and the wagon body 30 remain stationary. In order to hold or lock the wagon body stationary at such time suitable locking means may be employed for releasably securing the wagon body to the platform 10 and for the sake of illustration this locking means is shown as consisting of a number of hooks 40 pivoted to the wagon body 30 and engageable with eyes 41 fixed to the platform 10.

I claim:

1. In a toy wagon, a platform, running gear for the platform including a pair of ground wheels and an axle on which said ground wheels are mounted, means for fixing the ground wheels to the axle, a wagon body, means for mounting the wagon body on the platform for rotary movement about the central vertical axis of the platform and comprising cooperable annular bearing plates carried by the wagon body and the platform at the centers of the same, and cooperable arcuate bearing strips carried by the wagon body and the platform adjacent the ends of the same, and motion transmission means between the axle and the wagon body.

2. In a toy wagon, a platform, running gear for the platform including a pair of ground wheels having hubs and an axle on which said ground wheels are mounted, detachable pins passing through said hubs and axle for fixing the ground wheels to the axle, a wagon body mounted for rotation on the platform, motion transmission means between the axle and the wagon body, and locking means for holding the wagon body in fixed relation with respect to the platform when the pins for fixing the ground wheels to the axle have been moved.

CHARLES E. MORRIS.