

P. ALEXANDER, JR.

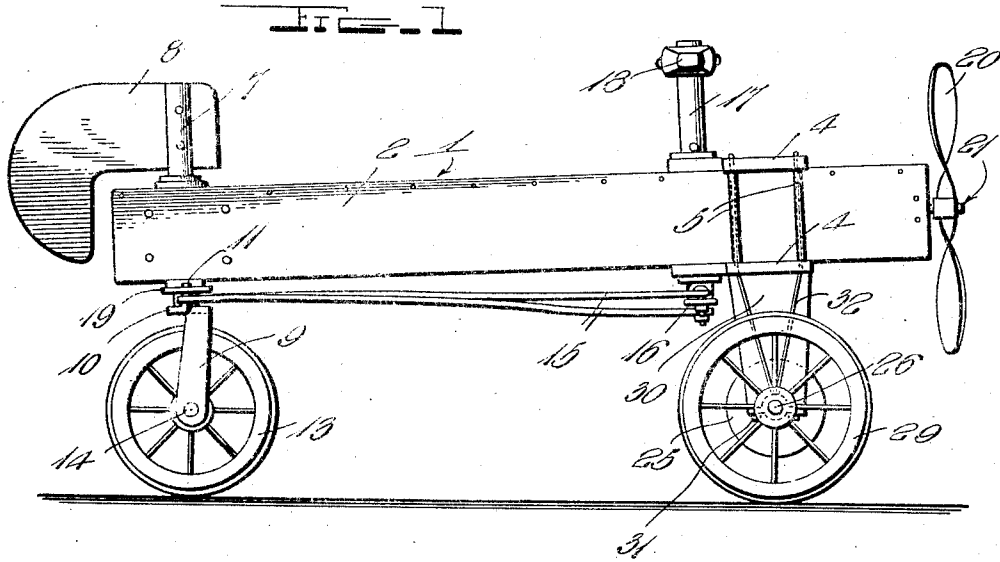
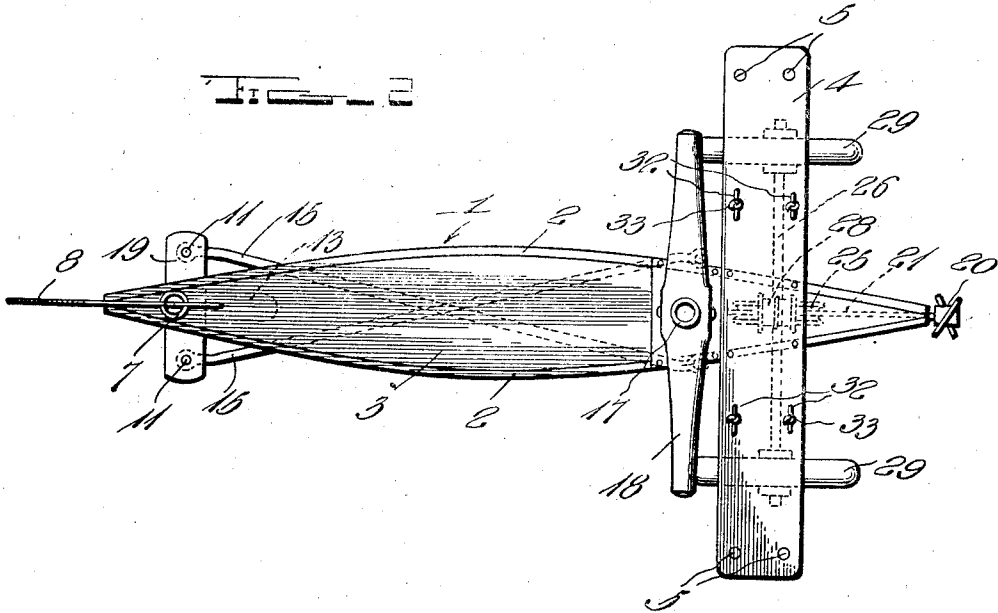
CHILD'S VEHICLE.

APPLICATION FILED MAY 24, 1920.

1,368,214.

Patented Dec. 28, 1920.

2 SHEETS—SHEET 1.



Inventor

Philip Alexander, Jr.

By *A. B. Wilson & Co.*

Attorneys

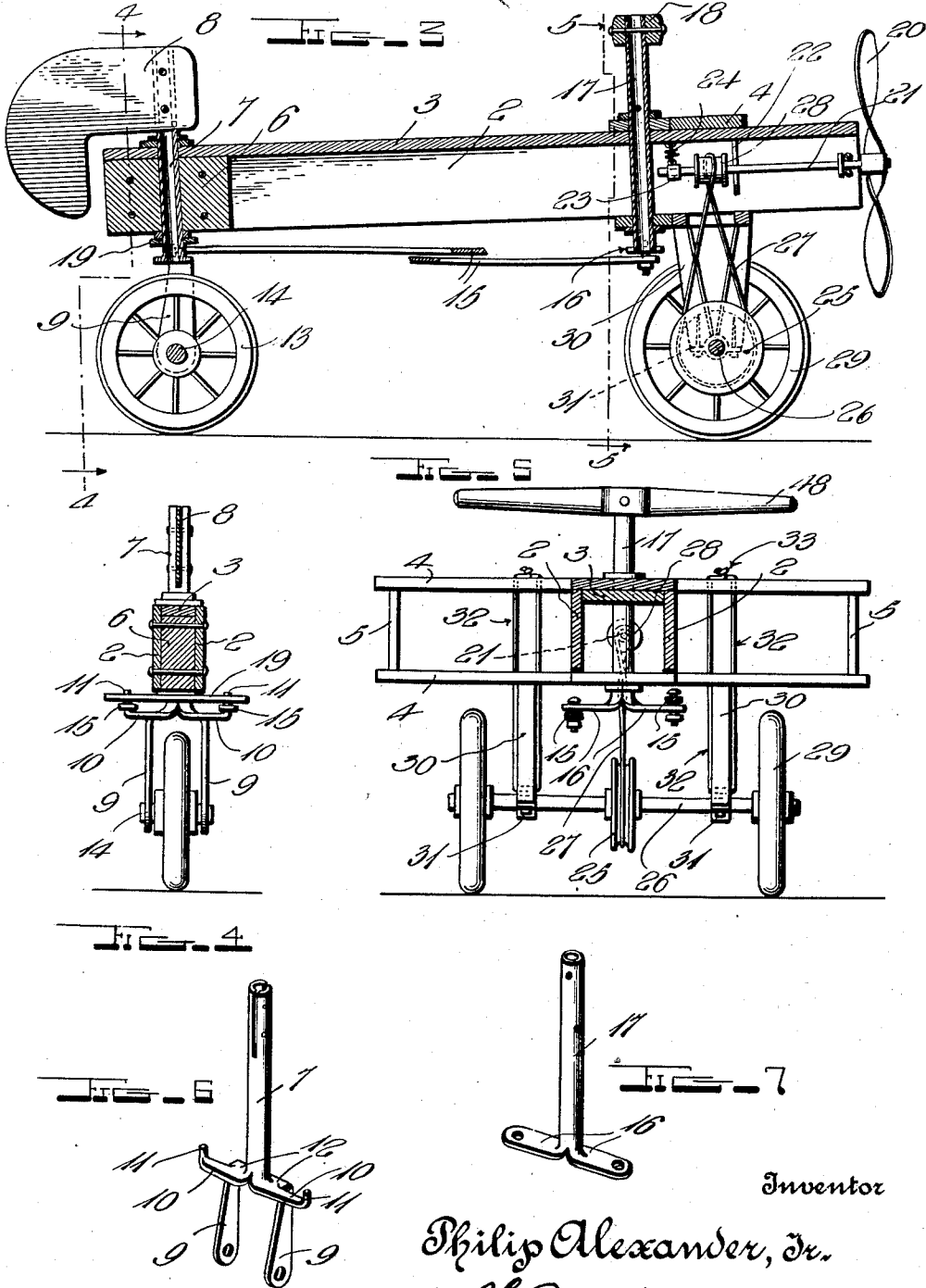
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UNITED STATES PATENT OFFICE.

PHILIP ALEXANDER, JR., OF CHURCHVILLE, NEW YORK.

CHILD'S VEHICLE.

1,363,214.

Specification of Letters Patent.

Patented Dec. 28, 1920.

Application filed May 24, 1920. Serial No. 383,906.

To all whom it may concern:

Be it known that I, PHILIP ALEXANDER, Jr., a citizen of Great Britain, residing at Churchville, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Children's Vehicles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in children's vehicles and it has more particular reference to one which is designed like an aeroplane, the body thereof being adapted to be straddled by a child so that the child may propel the vehicle with its feet by engaging them with the ground in the well known manner.

One object of the invention is to equip the vehicle with a propeller which is so constructed and arranged that it will be rotated continuously by the front axle as long as the vehicle is in motion.

Another object of the invention is to provide the vehicle with a guide wheel which is located at the rear end of the body, there being a rudder also employed which is actuated by the guide wheel, thus making the device still more like a real aeroplane and rendering it very easy to guide.

A further object of the invention is to produce a vehicle of the above mentioned type which is simple and novel in construction, strong, durable, inexpensive to manufacture and highly efficient in use.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevational view of a vehicle constructed in accordance with my invention.

Fig. 2 is a top plan view thereof.

Fig. 3 is a central longitudinal section with parts in elevation.

Figs. 4 and 5 are sections taken on the lines 4-4 and 5-5 respectively of Fig. 3.

Figs. 6 and 7 are detail perspective views of parts of the device detached.

In the drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 1 designates the pointed body of the plane which is made up of a plurality of planks or boards, there being two side planks 2 which converge from a point intermediate their ends toward the latter at which point they are nailed together, being spaced from each other and caused to assume the aforesaid pointed shape by the top board 3 which is disposed between them and nailed in place. At the front end of the body, disposed at right angles thereto are the planes 4 which may be secured in position in any suitable manner. They are held in spaced relation in the usual manner by the struts 5.

At the opposite or rear end of the body is a block of wood 6 which is secured between the side planks. This block is provided with a hole which extends therethrough thus adapting it as a hub for the axle 7 which is rotatable therein. This axle is vertically disposed and its opposite ends extend beyond the body in the manner shown. While this axle may be of some other construction, I prefer to use an ordinary piece of pipe and at its upper end I split it longitudinally and place the rudder 8 in the split, after which I secure it in place in any convenient way. I also split the pipe longitudinally at its other end, force the metal apart and flatten it, thus providing ears 9. Examination of this construction will disclose the fact that these ears are themselves split to provide other ears 10, the extremities of which are bent up to form short spindles 11. The first named ears 9 are bent laterally at 12 and then downwardly and each one is provided with an aperture. This construction forms a fork-shaped member which carries the guide wheel 13 which is disposed between the ears 9, the stub axles 14 extending through the apertures in said ears. Rotation of the shaft 7 is obtained by means of the pull rods 15 which cross one another in the manner shown, being provided at one end with apertures which fit over the short vertical spindles 11. At this end the rods are retained in position by the cross-piece 19. At their opposite ends these rods have pivotal connection with the apertured ears 16 on the lower end of the steering post 17. The latter is like the post 7, arranged vertically and is placed in just behind the planes 4. It is likewise hollow and is split longitudinally at its lower end to provide ears 16. With the construction described, it will be seen that when the handle 18 is grasped and

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turned, the posts 7 and 17 will be simultaneously rotated, and the guide wheel and rudder will be actuated.

Arranged at the front end of the body is a propeller 20. It is desirable to have the propeller continuously rotated all the time the vehicle is in use. This, of course, happens with all toy aeroplanes, but in the most of the cases there is no means employed for insuring rotation of the propeller and the only way it is rotated is by the air, against which it is driven. This method is not always effective, especially so when the vehicle is moved very slowly as it generally is by a small child. I overcome this objection and make the vehicle appear more like a real plane. To this end, I fix the propeller blade on a horizontally disposed rotatable shaft 21, which is journaled in novel inexpensive bearings and extends beyond the front end of the body. One of the bearings 22, is merely constructed of wires which are stretched across the side planks 2, while the other one for the rear end of the shaft is in the form of a sleeve 23, suspended by a coiled spring 24. This shaft receives motion from the pulley 25 which is secured on the front axle 26. Going more into detail of this construction, it is to be stated that the pulley 25 drives the flexible element 27 and the latter being wound around the pulley 28 on the shaft 21, imparts a rotary movement to the shaft. It is to be noted that, due to the spring supported bearing 23, the flexible driving element 27 is at all times retained under the proper tension for effective work. With this construction it will be seen as long as the front axle 26 carrying the wheel 29 is rotating, it will impart a rotary movement to the propeller blade 20, consequently, rotation of the latter is insured, and the device appears more realistic than similar toys.

The body of the vehicle is supported above the front axle by the legs 30 which are secured to the underface of the lower plane 4, they being provided at their lower ends with metal-lined semi-circular bearings which rest on the axle 26. Bearing plates 31 are arranged beneath the axle and are secured to the bottom of the legs 30. To reinforce the structure and prevent possible displacement of the legs 30, I employ wire members 32. Examination of these, will disclose the fact that there are four of such members employed and that each one is composed of a single piece of wire which is extended beneath the bearings in the lower ends of the legs. The ends of the wire are then passed upwardly through holes in the planes 4 and twisted together as shown at 33.

A vehicle of the foregoing construction may be cheaply made from pipes, planks and other easily obtainable parts. It is strong, durable and runs well, and has the appear-

ance of a real aeroplane in every respect. Due to the rear end guide, the tail of the body will act just like a real plane and will be more easy to guide than other similar vehicles.

In use, a child sits upon and straddles the body between the rudder and steering post. When in this position he or she may cause the vehicle to move by placing the feet on the ground and pushing in the well known manner. The vehicle is steered by operating the handle 18, as is obvious. During the movement of the vehicle, the axle 26 will impart a rotary movement to the propeller blade, also, movement of the handle will simultaneously operate the guide wheel 13 and rudder 8. So, the vehicle has every action of a real flying machine, consequently, the vehicle will be found attractive and desirable to all children.

A careful consideration of the foregoing description, taken in connection with the accompanying drawings, will be sufficient to enable persons skilled in the art to which the invention appertains, to obtain a thorough understanding thereof. For this reason, further description is deemed unnecessary.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred embodiment of the same, and that various minor changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

I claim:

1. A toy aeroplane comprising a wheel supported body, planes at one end, a propeller also at this end, hollow rotatably mounted posts at the opposite ends of the body, each extending both above and below the body and having their lower ends longitudinally split and forced apart to provide lateral oppositely disposed ears, the rear post being provided with a slot at its upper end, a rudder secured in said slot, a handle secured to the upper end of the front post, and rods crossing each other at their centers and connected to said ears, whereby when the front post is rotated, the remaining post will also be rotated.

2. A toy aeroplane comprising a wheel supported body, planes at the front end of the body, a propeller also at this end, a hub adjacent the rear end of the body, an axle rotatable in the hub, a portion of said axle extending below the body, the portion being longitudinally split at its lower end, the material being forced apart to form spaced ears which are first bent laterally and then downwardly to form a fork, said ears being apertured and longitudinally split from their out ends to form other ears which are bent so as to assume a right angle position

with respect to the axle, the extremities of the last named ears being bent laterally upward to provide pivots, pull rods connected to the pivots, a steering post to which the opposite ends of the rods are connected, and a guide wheel disposed between and carried by said fork.

3. A toy aeroplane comprising an elongated hollow body pointed at its opposite ends, wheels supporting the front end of the body, a guide wheel supporting the opposite end thereof, bearings secured in the

body adjacent its front end, one of said bearings being a sleeve which is suspended by a coiled spring, a horizontally disposed shaft journaled in said bearings and extending beyond the front end of the body, a propeller on the extended end of the shaft, a pulley on the shaft, a pulley on the front wheel-carrying axle, and a flexible driving element surrounding said pulleys.

In testimony whereof I have hereunto set my hand.

PHILIP ALEXANDER, JR.