April 19, 1949. I. MACKOWIAK 2,467,941

CHILD'S TRICYCLE

Filed April 18, 1946 2 Sheets-Sheet 1

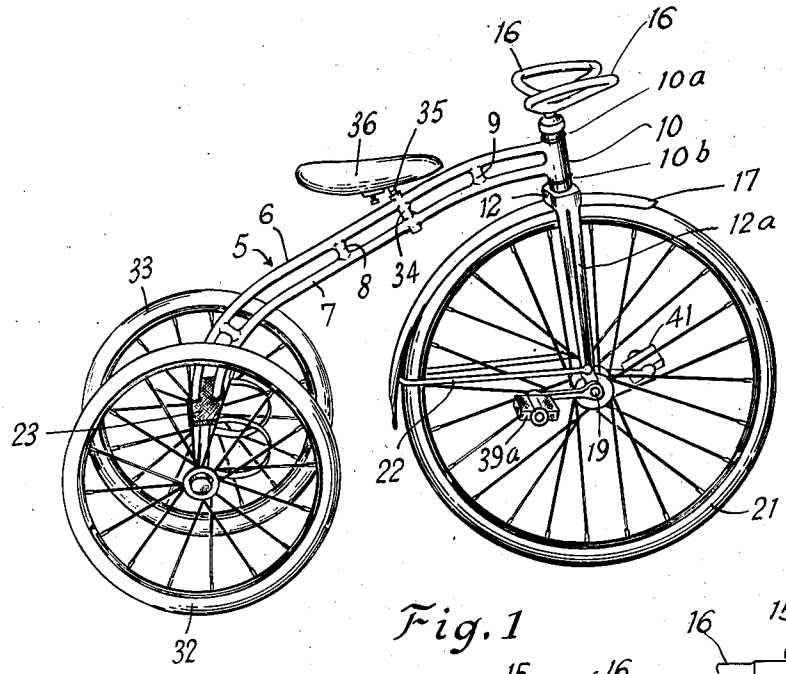


Fig. 1

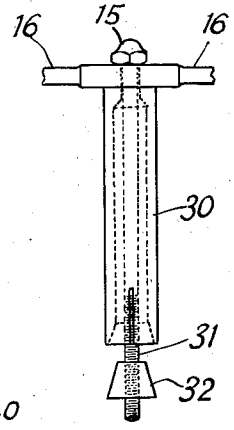


Fig. 13

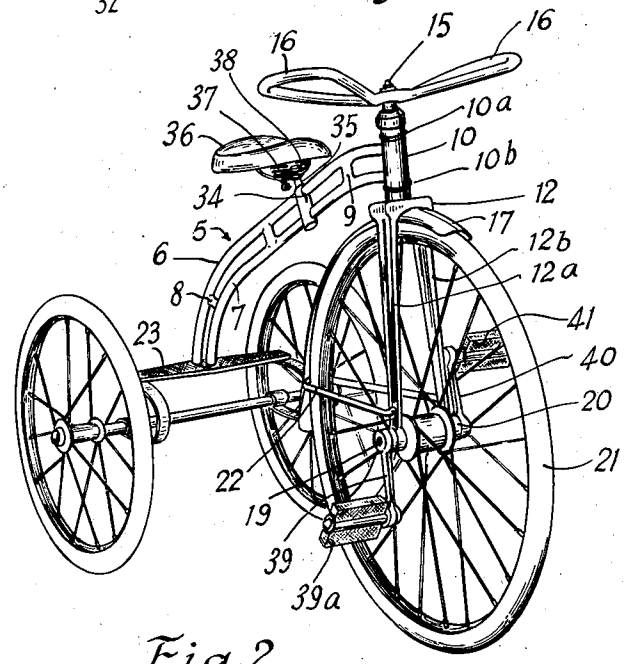


Fig. 2

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CHILD'S TRICYCLE

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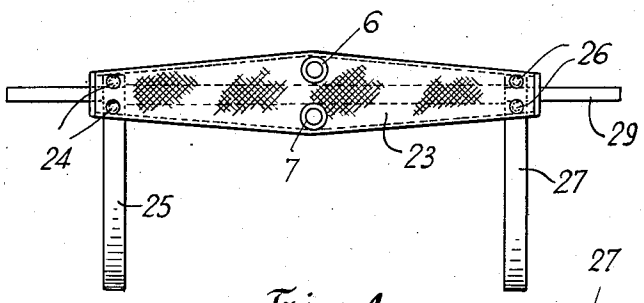


Fig. 4

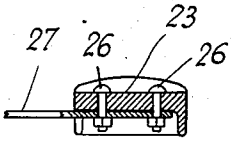


Fig. 5

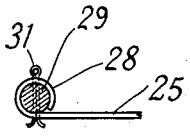


Fig. 6

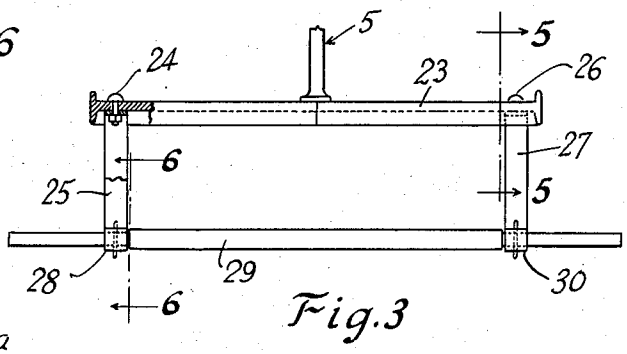


Fig. 3

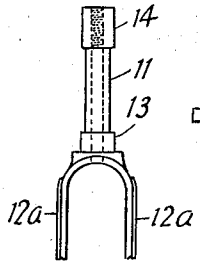


Fig. 12

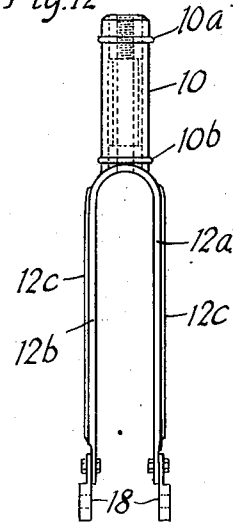


Fig. 7

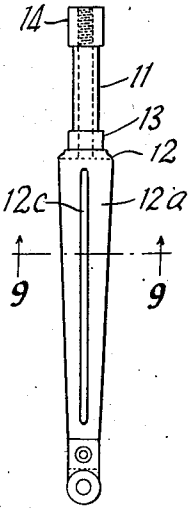


Fig. 8

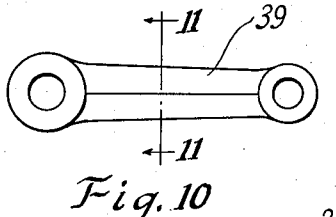


Fig. 10

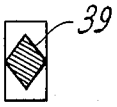


Fig. 11

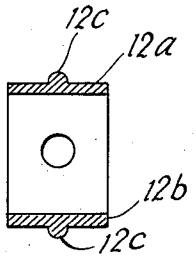


Fig. 9

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UNITED STATES PATENT OFFICE

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CHILD'S TRICYCLE

Ignatius Mackowiak, Burnham, Ill.

Application April 18, 1946, Serial No. 663,038

1 Claim. (Cl. 280—282)

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This invention relates to an improved tricycle for children, and one of the objects of the invention is to provide an improved spring support for the rear end of the main frame, which reduces the vibration of the main frame and simplifies the connection between the springs and the rear axle.

Another object of the invention is to provide a front wheel with a fork which is mounted to turn in a bearing of the forward end of the main frame, the fork being equipped with handle bars of special construction which provide lateral hand loops on opposite sides of the bearing.

A further object of the invention is the provision of a tricycle for children which have features of increased safety of operation and use, and which can be constructed largely of cast aluminum or aluminum alloys, so as to provide a light and durable vehicle for children.

With the above and other objects in view the invention comprises certain new and useful constructions, combinations, and arrangements of parts, clearly described in the following specification, and fully illustrated in the drawings, in which:

Fig. 1 is a perspective view looking at the side of the improved tricycle.

Fig. 2 is a perspective view, looking at the front of the improved tricycle.

Fig. 3 is a fragmentary elevation of the spring mounting, rear axle and foot plate.

Fig. 4 is a fragmentary plan view thereof.

Fig. 5 is a detail sectional view, taken on line 5—5 of Fig. 3, looking in the direction of the arrows.

Fig. 6 is a detail sectional view, taken on line 6—6 of Fig. 3, looking in the direction of the arrows.

Fig. 7 is a front elevation of the frame fork, and the frame bearing therefor.

Fig. 8 is a side elevation of the front fork detached from the frame bearing, the front wheel being omitted.

Fig. 9 is a detail cross sectional view, taken on line 9—9 of Fig. 8, looking in the direction of the arrows.

Fig. 10 is a side view of one of the cranks.

Fig. 11 is a transverse sectional view, taken on line 11—11 of Fig. 10, looking in the direction of the arrows.

Fig. 12 is a front elevation of the fork separated from its frame bearing.

Fig. 13 is a front elevation of the frame bearing, showing the means for clamping the handle bar thereto.

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Referring to the accompanying drawings, 5 designates a main frame, which comprises the upper tubular bar 6 and the lower tubular bar 7, together with the connecting tubes 8 and 9, which rigidly space the upper and lower tubular bars from each other.

The forward ends of the tubular bars 6 and 7 are rigidly connected, as by welding, to the tubular bearing 10, which is formed with external beads 10*a* and 10*b*.

In the tubular bearing 10 the tubular shaft 11 of the front wheel fork 12, is mounted to turn. This fork has a bearing 13 to engage the lower end of the tubular bearing 10, and is engaged by a nut 14, which is threaded thereon and which has a bearing in the upper end of the tubular bearing 10.

A handle bar shaft or rod 15 is secured in the tubular shaft 11, and carries the lateral hand loops 16 and 16. A mud guard 17 is disposed between the side arms 12*a* and 12*b* of the fork 12, and secured to the upper end of the fork. Each side arm of the fork is formed with a stiffening rib 12*c*. The lower ends of the side arms 12*a* and 12*b* of the fork 12 are formed with bearing eyes 18, through which the front axle 19 extends, and this axle is formed with or provided with a bearing 20, which carries the front wheel 21, of conventional construction. A U-shaped bail or arm 22 is pivotally connected at its forward ends to the side arms 12*a* and 12*b*, and is also connected with the mud guard 17.

The rear end of the frame 5 is coupled to the cross bar 23, which is made of cast aluminum and is provided with a cast tread face on its upper side.

This foot plate or cross bar 23 is tapered from the center outwardly in both directions. One end portion of this foot bar or plate is connected by the bolts or rivets 24 to the upper end of the U-shaped leaf spring 25, and the other end of this foot bar or plate is connected by the bolts 26 to the upper end of the U-shaped leaf spring 27.

The lower end of the leaf spring 25 is formed with a loop 28, which receives the reduced end of the rear axle 29, and the lower end of the leaf spring 27 is formed with a loop 30, which receives the other reduced end of the rear axle 29. A cotter pin 31 is extended through each loop and the enclosed portion of the rear axle to couple the springs to the rear axle. A small ground wheel 32 is mounted on one end of the rear axle 29, and another ground wheel 33 is mounted on the other end of the rear axle, outwardly of the springs.

The main frame **5** is formed with a bearing socket **34**, which receives the post **35** of the seat **36**. While this seat is shown to include springs **37** and **38**, these springs may be dispensed with and reliance placed on the main springs **25** and **27**.

On one end of the front axle **19** a crank **39** is mounted and on the other end a crank **40** is mounted. The crank **39** carries a foot pedal **39a** and the crank **40** carries a foot pedal **41**.

The crank arms are constructed with diamond shaped shanks or cross sections, as shown in Fig. 11. The main frame is of such design as to eliminate serious accidents resulting from the falling of a child against the vehicle. The hand loops of the handle bar provide firm and easy grips for a child. The spring support will sustain two children on the vehicle. The front fork extends from the front axle in a straight line, and the handle bars are located so that this straight line connection is maintained, thus eliminating twisting action being transmitted from the front wheel to the handle bars.

The front bearing **10** receives the sleeve **30**, through which the rod **31** extends. The lower end of this rod is screw threaded and is engaged by the conical nut **32**, which has a matching fit in the lower end of the sleeve **30**. The upper end of the rod **31** extends through the central part of the cast aluminum handle bar **16**, and is engaged by the nut **15** which is threaded on the rod to clamp the handle bar to the front fork, so that the two will turn together.

It is understood that various changes in the details of construction, their combination and construction, may be made, within the limit of the claim, which defines the invention.

Having described the invention, I claim as new:

A tricycle having a main frame, a foot bar rigidly connected to the rear end of the main frame, a seat mounted on the main frame, a front fork mounted to turn on the main frame, a wheel mounted to turn on the front fork, a U-shaped spring having its upper end rigidly clamped to one end of the foot bar, a similar spring similarly rigidly clamped to the other end of the foot bar, the lower end of each spring having a terminal loop, an axle extending through both terminal loops, cotter pins extending through said loops and axles, and wheels mounted to turn on the ends of the last-named axle.

IGNATIUS MACKOWIAK.

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