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(54) Toy vehicle.

(57) In order to pull a toy vehicle, a cord (9) provided with a handle grip (8) on one end is coupled to a vehicle body (2). The vehicle body is provided with a winder (10) for winding the cord (9), and a winding drum (14) provided in the winder is urged by a spring (16) to rotate in a direction for taking up the cord. When the cord is not in use, therefore, the cord is automatically wound on the winder so that the handle grip is located with respect to the vehicle body.

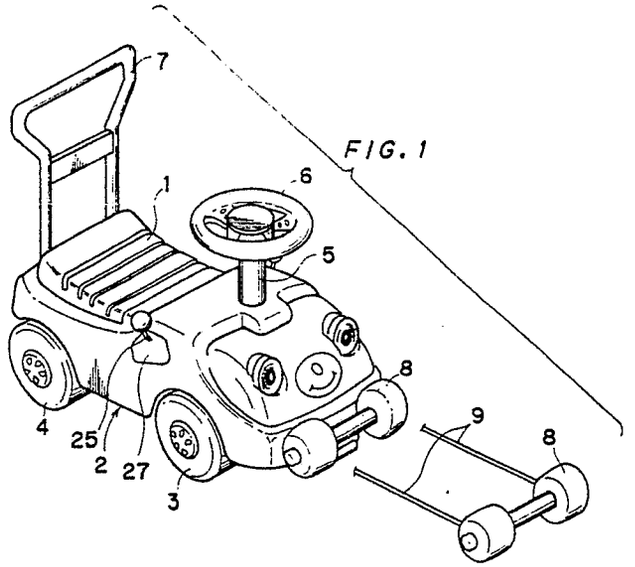

FIG. 1

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Toy Vehicle

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a toy vehicle, and more particularly, it relates to improvements for varying modes of play with a toy vehicle.

Description of the Background Art

A conventional toy vehicle, which is of interest to the present invention, comprises a vehicle body provided with a seat for a child and a plurality of wheels for movably supporting the vehicle body with respect to the ground. Such a toy vehicle is disclosed in, for example, Japanese Utility Model Publication No. 2707/1983 in the name of the assignee.

In general, the aforementioned toy vehicle is so structured that a child sits astride the seat and kicks the ground with his feet to drive the vehicle. A push rod may be provided on a rear end portion of the vehicle body. In this case, the toy vehicle can also serve as a pushcart. Further, the direction of front wheels may be changed by a steering wheel. In this case, the toy vehicle can be turned to a different direction during the play.

As hereinabove described, a toy vehicle is designed to allow various modes of play, in order to arouse the interest of children as well as to improve its commercial value.

SUMMARY OF THE INVENTION

Accordingly, an object of the present invention is to attain improvements for further varying the modes of play with a toy vehicle of the aforementioned type.

The present invention is directed to a toy vehicle which comprises a vehicle body provided with a seat for a child and a plurality of wheels movably supporting the vehicle body with respect to the ground. In view of the aforementioned technical subject, employed is the following structure:

The inventive toy vehicle further comprises cord means which is provided on one end with a handle grip for pulling the toy vehicle. The other end of the cord means is mounted on the vehicle body. The vehicle body is provided with a portion for locating the handle grip and the cord means when the same are not in use.

The inventive toy vehicle can be also used as a pullcart by drawing out the cord means and pulling the toy vehicle through the handle grip.

When the toy vehicle is not used as a pullcart, the handle grip and the cord means are located in a prescribed portion provided in the vehicle body, not to hinder another mode of play. Further, the cord means will not be caught in any portion, so that no accident of upsetting the toy vehicle is caused by the cord means.

These and other objects, features, aspects and advantages of the present invention will become more apparent from the following detailed description of the present invention when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view showing the appearance of a toy vehicle for illustrating a first embodiment of the present invention;

Fig. 2 is a side sectional view of the toy vehicle shown in Fig. 1;

Fig. 3 is a front sectional view showing a part of the toy vehicle shown in Fig. 1;

Fig. 4 is adapted to illustrate a second embodiment of the present invention, with a mechanism added to the first embodiment;

Fig. 5 is a perspective view showing a forward portion of a toy vehicle according to a third embodiment of the present invention;

Fig. 6 is a perspective view showing a combined state of handle grips 28 and 29 shown in Fig. 5;

Fig. 7 is a side sectional view showing a toy vehicle according to a fourth embodiment of the present invention;

Fig. 8 is a sectional view showing a forward portion of a vehicle body of a toy vehicle according to a fifth embodiment of the present invention;

Fig. 9 is a sectional view showing a forward portion of a vehicle body of a toy vehicle according to a sixth embodiment of the present invention;

Fig. 10 is a perspective view showing a forward portion of a vehicle body of a toy vehicle according to a seventh embodiment of the present invention; and

Fig. 11 is a perspective view showing a frontwardly drawn-out state of a handle grip 48 shown in Fig. 10.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figs. 1 to 3 show a first embodiment of the

present invention. A toy vehicle according to the first embodiment comprises a vehicle body 2 which is provided with a seat 1 for a child, and a plurality of wheels, such as two front wheels 3 and two rear wheels 4, for example, for movably supporting the vehicle body 2 with respect to the ground.

The front wheels 3 may be coupled to a lower end of a handle post 5 which is rotatably supported with respect to the vehicle body 2, so that the direction thereof is changed by rotation of a steering wheel 6 which is mounted on an upper end of the handle post 5.

A push rod 7 may be provided to upwardly project from a rear end portion of the vehicle body 2.

In the state shown in Figs. 1 and 2, a handle grip 8 is located on a forward end of the vehicle body 2. The handle grip 8 is mounted on first ends of cords 9. Second ends of the cords 9 are mounted on the vehicle body 2 in a mode as described below.

As shown in Figs. 2 and 3, most part of the vehicle body 2 is in the form of a downwardly opening cavity. A winder 10 is provided in this cavity portion. In more concrete terms, the seat 1 is mounted to be upwardly rotatable about pivot pins 11 shown in Fig. 2, while a container 12 is defined under the seat 1. The winder 10 is mounted on a front wall 13 of the container 12.

The winder 10 comprises a winding drum 14 for winding the cords 9, which winding drum 14 is rotatably held with respect to a housing 15. This winding drum 14 is regularly urged by a spirally shaped spring 16 to rotate in one direction. The cords 9 are received through an opening 17 which is defined in the housing 15, so that end portions thereof are fixed to the winding drum 14. Thus, the winder 10 is adapted to regularly pull the handle grip 8 toward the winder 10 through the cords 9.

The winder 10 applies pulling force to the handle grip 8 through the aforementioned cords 9, thereby to locate the handle grip 8 with respect to the vehicle body 2. The handle grip 8 is further provided with projections 18 for encircling the first ends of the cords 9 while the vehicle body 2 is provided in its forward end with locating holes 19 for receiving the projections 18, in order to further ensure location of the handle grip 8. The projections 18 are preferably tapered as shown in Fig. 2.

In order to use the toy vehicle as a pullcart in the aforementioned first embodiment, the cords 9 are frontwardly drawn out through the handle grip 8 as shown in the right-hand part of Fig. 1. When the handle grip 8 is released to finish play with the pullcart, the cords 9 are automatically taken up by the winder 10 through the above described action of the spring 16, so that the projections 18 engage with the locating holes 19 in the final stage.

It is also to be noted that the handle grip 8 brings no anharmonicity in design with respect to other parts of the toy vehicle when the same is not in use and located on the vehicle body 2, as clearly shown in Fig. 1.

Fig. 4 is adapted to illustrate a second embodiment of the present invention.

The second embodiment is based on the aforementioned first embodiment, and provided with additional function. That is, the second embodiment has a function for maintaining a drawn-out state of the cords 9. Fig. 4 illustrates the aforementioned winding drum 14, which is shown in Figs. 2 and 3. As hereinabove described, the winding drum 14 is regularly urged by the spring 16 to rotate along an arrow 20. Thus, automatic winding of the cords 9 is inhibited by selectively inhibiting such rotation along the arrow 20.

In order to achieve the aforementioned action, a ratchet wheel 21 is provided to integrally rotate with the winding drum 14. On the other hand, a pawl 23 is rotatably mounted on a pivot shaft 22 which is provided in a fixed position of the vehicle body (not shown). The pawl 23 is regularly urged by a spring 24 to clockwisely rotate and engage with the ratchet wheel 21. Further, an operating lever 25 is rotatably held by the pivot shaft 22. This operating lever 25 is located in a position shown in Fig. 1, for example. The operating lever 25 is provided on its lower end with an engaging portion 26 which engages with the pawl 23. A holding cover 27 of an elastic material such as rubber is mounted on the vehicle body (not shown), in order to hold the operating lever 25 in a constant position unless particular force is applied to the operating lever 25. The holding cover 27 is mounted in a mode shown in Fig. 1, for example.

When the cords 9 are drawn out in the structure shown in Fig. 4, the pawl 23 is disengaged from the ratchet wheel 21 to allow free rotation of the winding drum 14. When the cords 9 are completely drawn out, the pawl 23 engages with the ratchet wheel 21 again to inhibit the rotation of the winding drum 14 along the arrow 20, thereby to maintain the cords 9 in the drawn-out state. In order to again wind the drawn-out cords 9 on the winding drum 14, the operating lever 25 is driven to rotate in the anticlockwise direction. In response to this, the engaging portion 26 separates the pawl 23 from the ratchet wheel 21 against elasticity of the spring 24, whereby the ratchet wheel 21 and the winding drum 14 rotate along the arrow 20. Thus, the cords 9 are wound on the winding drum 14.

Figs. 5 and 6 show a third embodiment of the present invention.

The feature of the third embodiment resides in the configuration or structure of handle grip means.

In this embodiment, employed are a pair of handle grips 28 and 29, which are in the form of right and left hands of a man. These handle grips 28 and 29 may be used in a separate state as shown in Fig. 5, or in a coupled state simulating clasped hands of a man, as shown in Fig. 6. The handle grips 28 and 29 are preferably formed of a material having appropriate elasticity and rigidity so that the coupled state shown in Fig. 6 is not released unless force exceeding a prescribed level is applied.

It is to be noted that, in the third embodiment of the present invention, the handle grips 28 and 29 spoil no design unity in relation to other parts of the toy vehicle, and provide an extremely interesting appearance.

In the third embodiment of the present invention, the structure described with reference to the first or second embodiment can be employed for the parts other than the handle grips 28 and 29.

Although the winder 10 described with reference to the first embodiment is adapted to automatically wind the cords 9, the cords 9 may be manually wound. In this case, the winding drum 14 is provided with a handle, for example, to wind the cords 9 by rotating the handle.

Fig. 7 shows a fourth embodiment of the present invention.

This embodiment comprises no winder for cords. Cords 31 provided with a handle grip 30 on first ends thereof are passed in pressed states through elastic bushes 32 which are provided on the forward end of the vehicle body 2, and then passed in pressed states through similar bushes 33 which are provided on a front wall 13 of a container 12. Stoppers 34, which cannot be passed through the bushes 33, are mounted on second ends of the cords 31.

When the cords 31 are not drawn out as shown in Fig. 7, the cords 31 are extended in relatively strained states between the bushes 32 and 33, while remaining portions thereof are stored in the container 12.

In order to use this toy vehicle as a pullcart, the handle grip 30 is held to frontwardly draw out the cords 31. At this time, the cords 31 are passed through the bushes 32 and 33, to be drawn out until the stoppers 34 are in contact with the bushes 33.

When the toy vehicle is not used as a pullcart, the cords 31 are stored in the container 12 as shown in Fig. 7. In order to thus store the cords 31, a seat 1 may be driven to rotate about pivot pins 11 to open the container 12, thereby to draw the cords into the container 12.

Fig. 8 shows a fifth embodiment of the present invention.

Fig. 8 shows a front portion of a vehicle body 2a in section. According to this embodiment, a bonnet part 35 provided in a front portion of the vehicle body 2a is rotatable about a pivot shaft 36. A container 38 for cords 37 is defined under the bonnet part 35. A handle grip 39 mounted on first ends of the cords 37 is placed on a locating stand 40 which projects from the forward end of the vehicle body 2a. Second ends of the cords 37 are fixed to the vehicle body 2a by stoppers 41, for example.

In order to use the toy vehicle according to this embodiment as a pullcart, the handle grip 39 may be directly drawn out in the forward direction. The cords 37 are frontwardly drawn out in response to this. When the toy vehicle is not used as a pullcart, the handle grip 39 is placed on the locating stand 40, and the bonnet part 35 is opened to store the cords 37 in the container 38.

Fig. 9 shows a sixth embodiment of the present invention.

Fig. 9 shows a front portion of a vehicle body 2b in section. Cords 43 provided with a handle grip 42 on first ends are stored in a container 44, which is defined by a cavity. Second ends of the cords 43 are mounted on a bottom surface wall of the container 44 by stoppers 45, for example. The handle grip 42 is placed on a locating stand 46 which is defined by a cavity on a forward end of the vehicle body 2b.

In order to use the toy vehicle according to this embodiment as a pullcart, the handle grip 42 may be held to simply draw out the cords 43 in the forward direction. When the toy vehicle is not used as a pullcart, on the other hand, the handle grip 42 is placed on the locating stand 46 and the cords 43 are stored in the container 44.

Figs. 10 and 11 show a seventh embodiment of the present invention.

Figs. 10 and 11 are perspective views showing a front portion of a vehicle body 2c. This embodiment is characterized in that cords 47 are formed by curling cords. A handle grip 48 is mounted on first ends of the cords 47. Second ends of the cords 47 are mounted on a pair of brackets 49 which are provided on the forward end of the vehicle body 2c. A locating cavity 50 for locating the handle grip 48 is provided in a region held by the pair of bracket 49.

When the toy vehicle is not used as a pullcart, the handle grip 48 is located in the locating cavity 50 and the cords 47 are placed in contracting states on an upwardly directed surface 51 which is defined on the forward end of the vehicle body 2c as shown in Fig. 10. When the toy vehicle is used as a pullcart, on the other hand, the handle grip 48 may be frontwardly drawn out as shown in Fig. 11, so that the cords 47 are stretched responsively. In order to finish play with the pullcart, the handle grip 48 is placed on the locating cavity 50, so that the

cords 47 automatically contract to return to the state shown in Fig. 10.

While the present invention has been described in relation to a plurality of embodiments, various modifications are available within the scope of the present invention.

For example, although the handle grip is prepared independently of the cords in each embodiment, such a handle grip may be defined by parts of the cords.

Further, the two cords drawn out from the vehicle body may be replaced by a single cord.

Although the present invention has been described and illustrated in detail, it is clearly understood that the same is by way of illustration and example only and is not to be taken by way of limitation, the scope of the present invention being limited only by the terms of the appended claims.

Claims

1. A toy vehicle comprising a vehicle body (2, 2a, 2b, 2c) provided with a seat (1) for a child and a plurality of wheels (3, 4) for movably supporting said vehicle body with respect to the ground, said toy vehicle further comprising:
a cord (9, 31, 37, 43, 47) for pulling said toy vehicle, said cord having an end provided with a handle grip (8, 28, 29, 30, 39, 42, 48) and another end mounted on said vehicle body;
handle grip locating means (19, 32, 40, 46, 50) for locating said handle grip when the same is not in use; and
locating means (10, 12, 33, 38, 44, 51) for locating said cord when the same is not in use.

2. A toy vehicle in accordance with claim 1, wherein said handle grip locating means comprises means defining a locating hole (19) for receiving a part (18) of said handle grip (8) in said vehicle body (2).

3. A toy vehicle in accordance with claim 1, wherein said handle grip locating means comprises a bush (32) of an elastic material provided in said vehicle body (2) to receive said cord (31) in a pressed state for locating said handle grip (30) through said cord (31).

4. A toy vehicle in accordance with claim 1, wherein said handle grip locating means comprises means (40, 46, 50) defining a cavity for receiving at least a part of said handle grip (39, 42, 48) in said vehicle body (2a, 2b, 2c).

5. A toy vehicle in accordance with claim 1, wherein said handle grip (8, 30, 39, 42, 48) is in the form of a rod.

6. A toy vehicle in accordance with claim 1, wherein two said cords (9, 47) are drawn out from said vehicle body (2, 2c).

7. A toy vehicle in accordance with claim 6, wherein a pair of said handle grips (28, 29) are provided in the form of right and left hands which are clasped with each other such that said right hand part (28) and said left hand part (29) can be separated from each other, said two cords (9) being coupled to said right hand part (28) and said left hand part (29) respectively.

8. A toy vehicle in accordance with claim 1, wherein said cord locating means comprises a winder (10) mounted on said vehicle body (2), said winder comprising a rotatable winding drum (14) for taking up said cord (9).

9. A toy vehicle in accordance with claim 8, wherein said winder (10) comprises spring means (16) urging said winding drum (14) to rotate in a direction for taking up said cord (9).

10. A toy vehicle in accordance with claim 9, wherein said winder (10) comprises means (21) for selectively inhibiting rotation of said winding drum (14) caused by said spring means (16).

11. A toy vehicle in accordance with claim 1, wherein said cord locating means comprises a container (12, 38, 44) defined in said vehicle body (2, 2a, 2b).

12. A toy vehicle in accordance with claim 1, wherein said cord (47) is formed by a curling cord.

13. A toy comprising a body, cord means provided with handle grip means for pulling the body, the cord means being storable within the body or a cavity defined thereby and the handle grip means being locatable on or adjacent the body when the cord means is so stored.

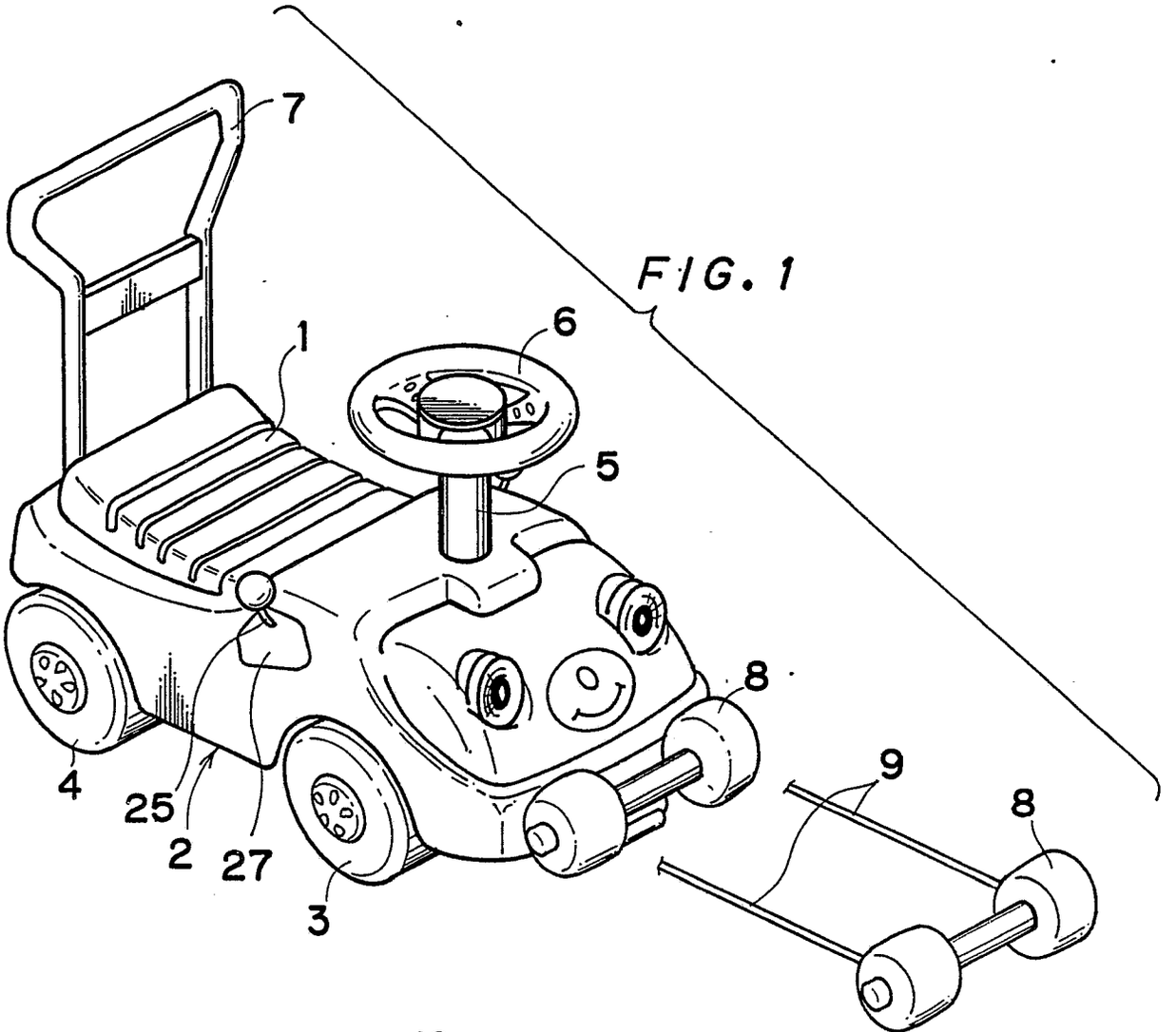


FIG. 1

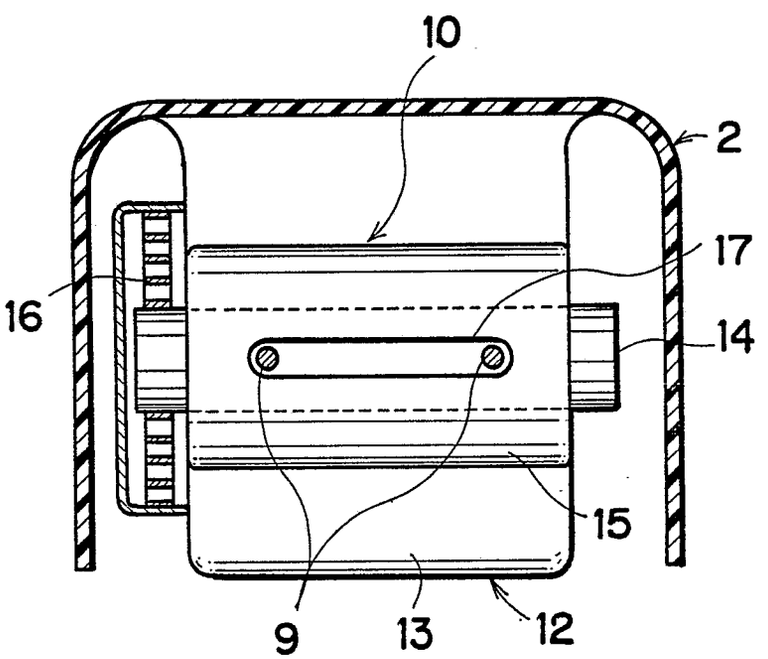


FIG. 3

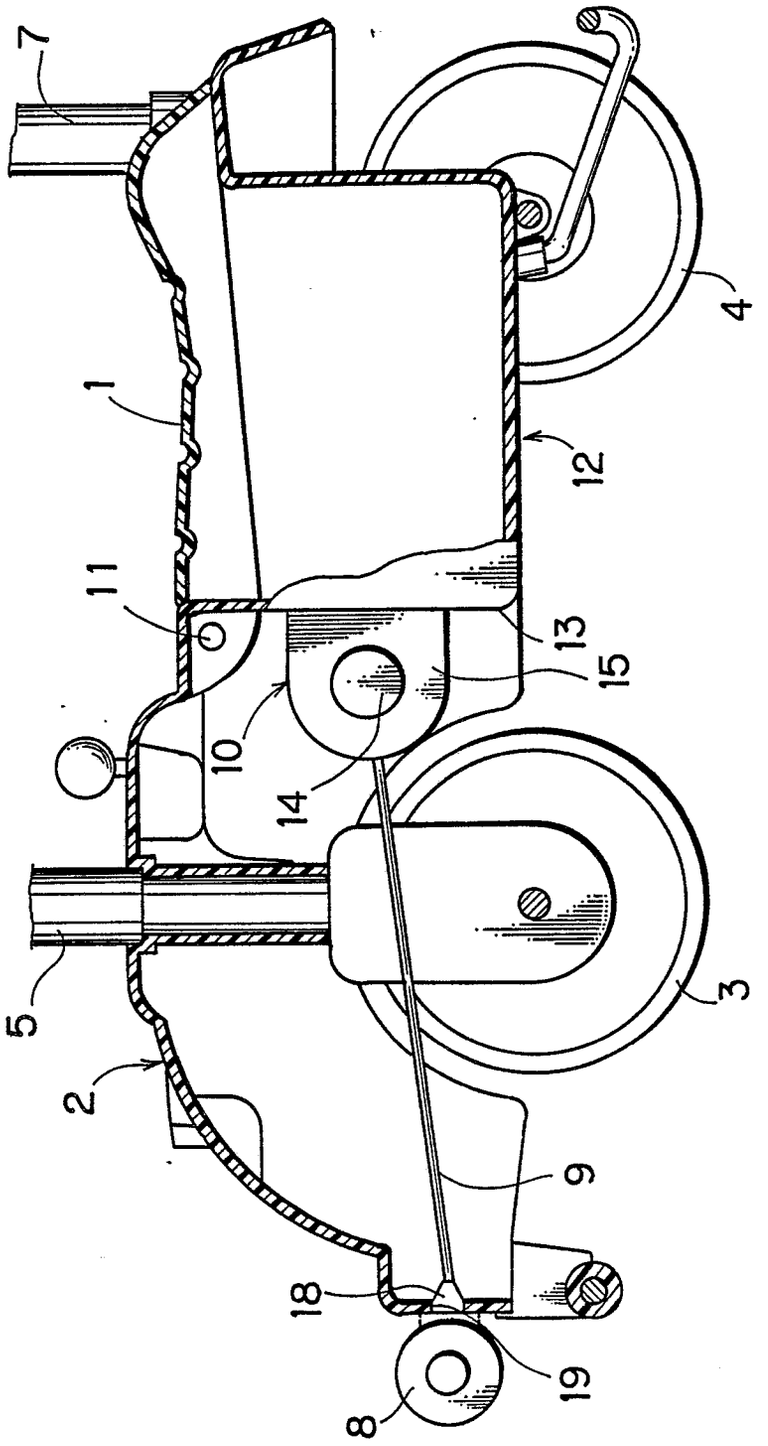
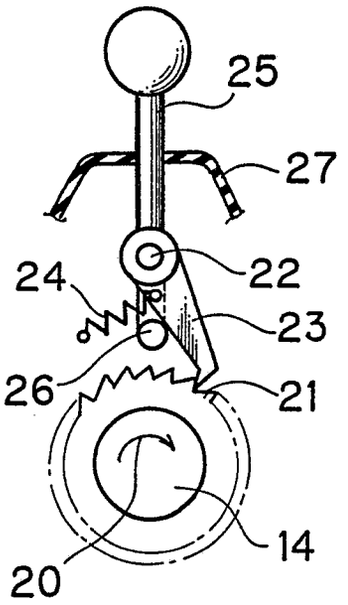


FIG.2

FIG.4



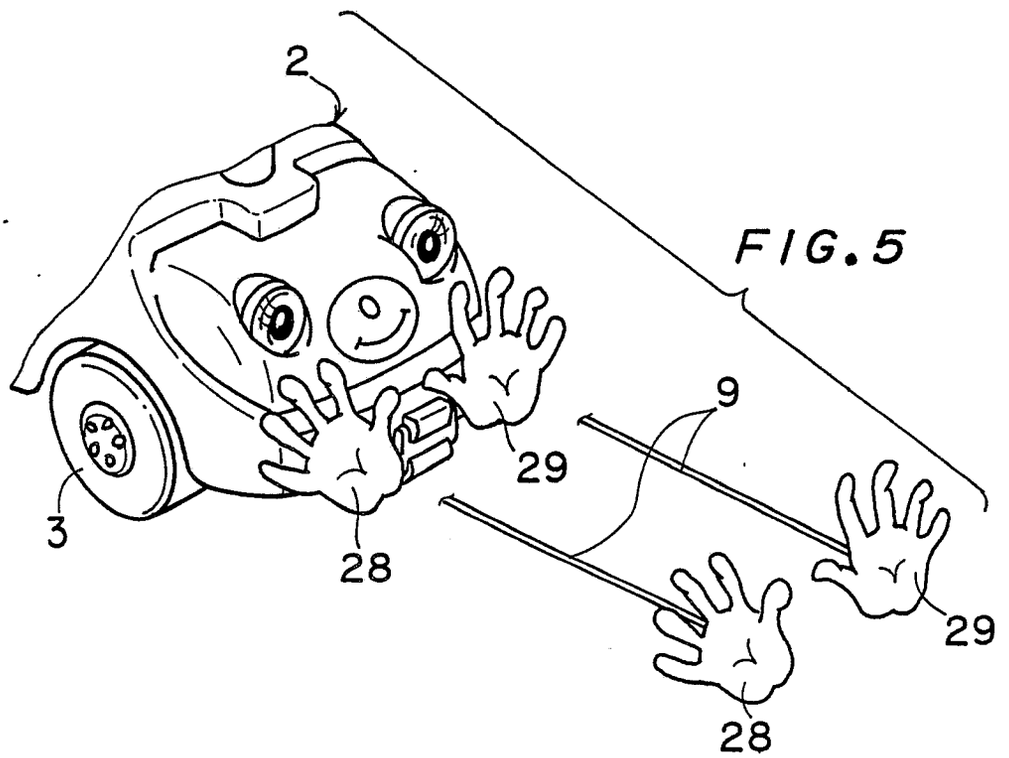


FIG.5

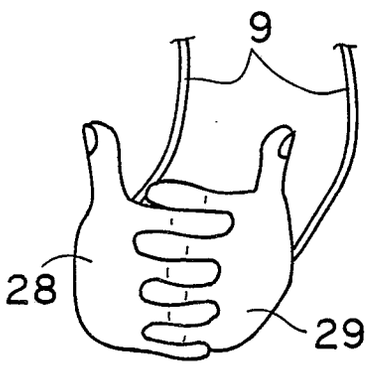


FIG.6

FIG. 7

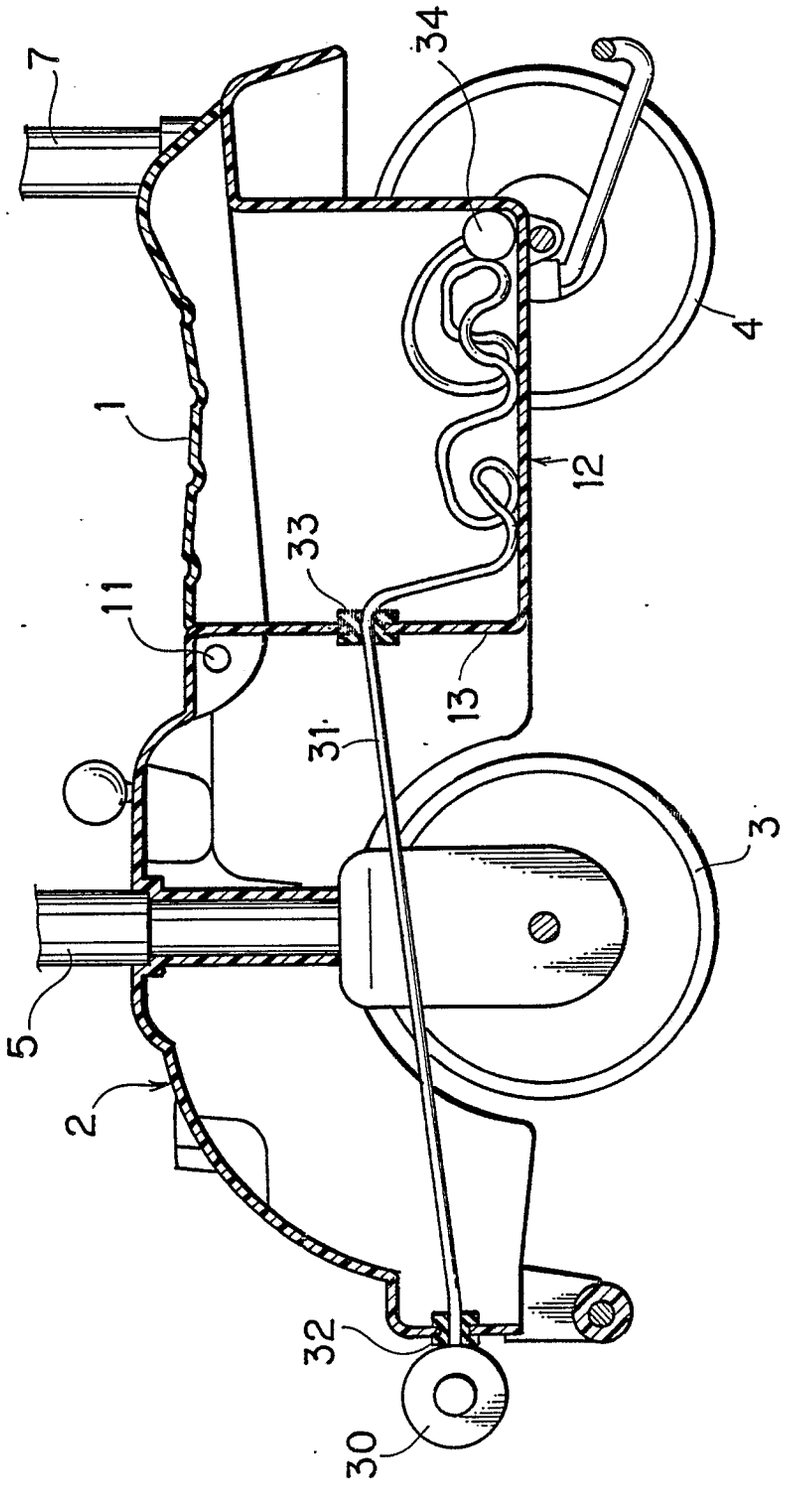


FIG. 8

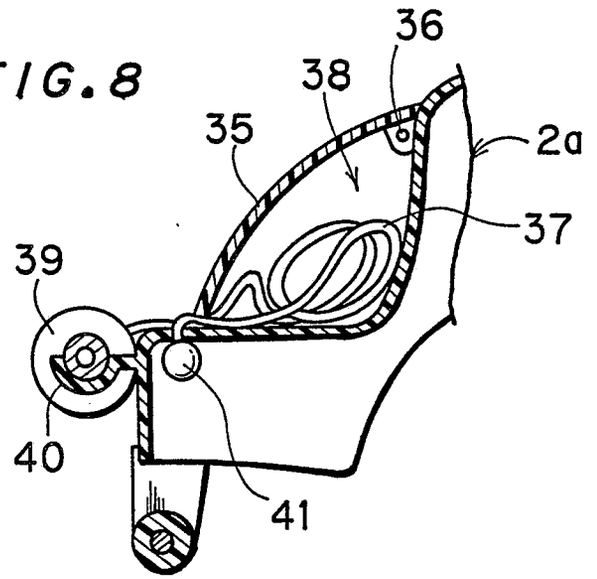


FIG. 9

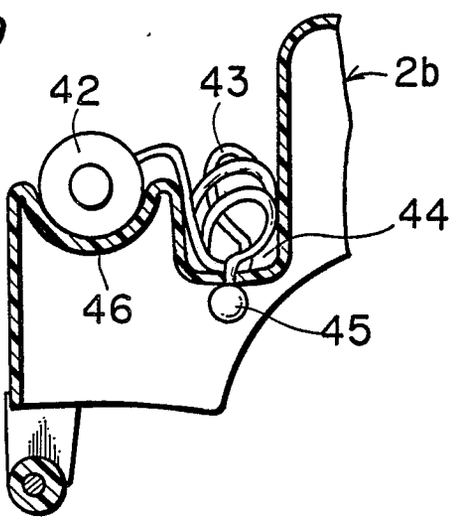


FIG. 10

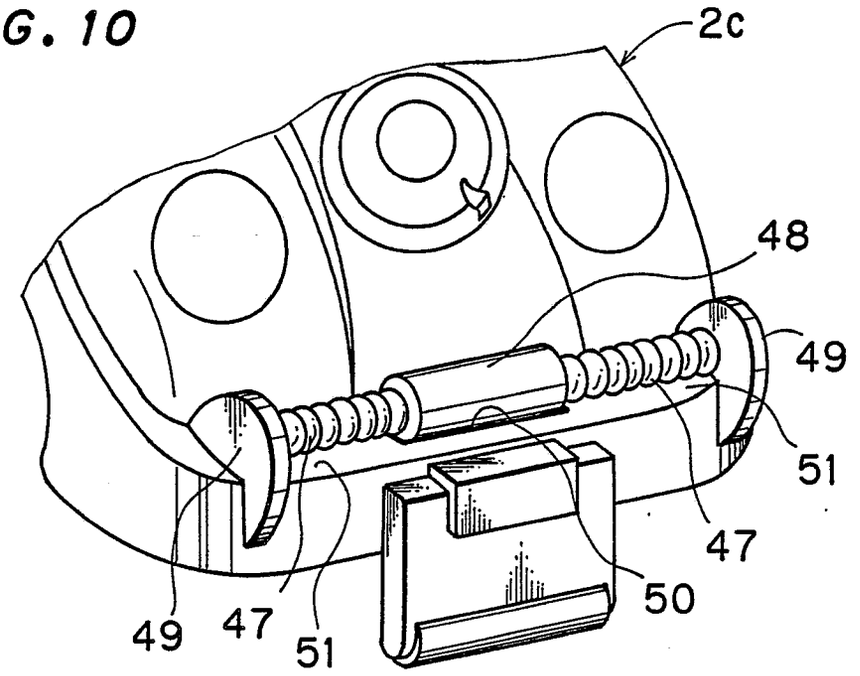


FIG. 11