Jan. 27, 1959 H. H. BLOCK 2,871,015

RIDING TOY

Filed March 1, 1956

Fig. 1.

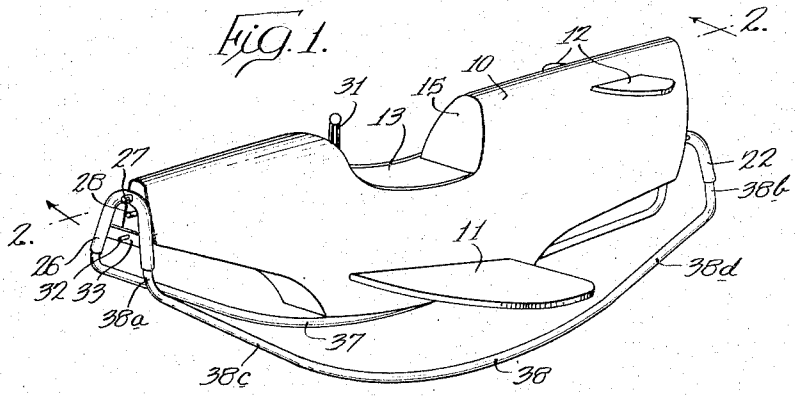


Fig. 2.

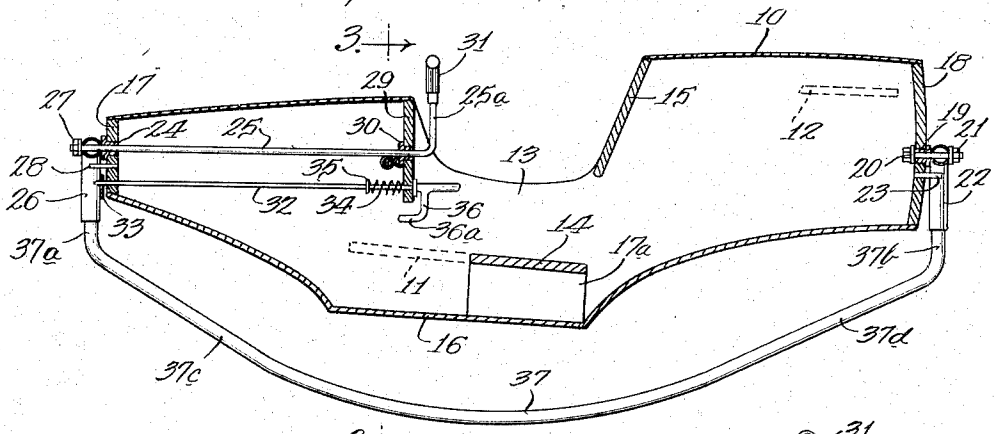


Fig. 3.

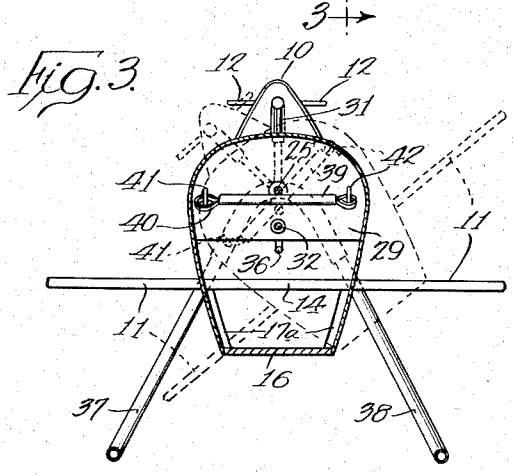
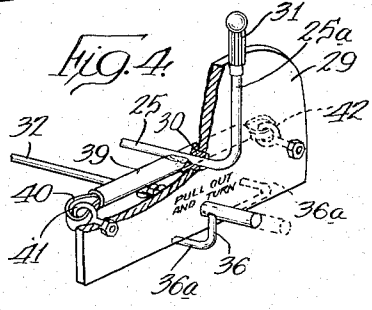


Fig. 4.



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United States Patent Office 2,871,015
Patented Jan. 27, 1959

2,871,015

RIDING TOY

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Application March 1, 1956, Serial No. 568,826

10 Claims. (Cl. 272—1)

This invention relates to a riding toy or similar structure.

Various types of riding devices, particularly riding toys for children, have been designed to simulate motions of natural objects. Thus, it is customary to have toy automobiles adapted to be ridden by children, toy horses, and similar articles. In recent years, there has also been a demand for toy airplanes, rocket ships, space ships, and other such devices that would simulate motion with a particular type of craft being copied. The invention here is concerned with a riding structure that will provide both a rocking motion and simultaneously an oscillating, swinging motion, each under the control of the operator.

One of the features of this invention is to provide a riding toy or the like comprising a body having a rider supporting portion, a support for the body upon which the body is mounted for oscillation about an axis, and means for oscillating the body accessible from the rider supporting portion comprising a control member engaging the body at an area that at least approximately coincides with the axis of oscillation.

Another feature of the invention is to provide improved means for oscillating a rider supporting body about an axis, with this oscillating means engaging the body at an area at least adjacent to the axis of oscillation. Other features and advantages of the invention will be apparent from the following description of one embodiment thereof taken in conjunction with the accompanying drawings.

Of the drawings:

Figure 1 is a perspective view of one embodiment of the invention;

Figure 2 is a section taken substantially along line 2—2 of Figure 1;

Figure 3 is a sectional elevation taken substantially along line 3—3 of Figure 2; and

Figure 4 is a detailed view partially broken away for clarity of illustration of the dashboard portion of the toy and structure associated therewith.

In the embodiment shown in the drawings, the toy is an airplane comprising a fuselage **10**, wings **11**, and stabilizers **12**. The fuselage has a cockpit **13** adapted to be entered by the rider with a seat **14** and backrest **15** associated therewith. The seat **14** and wings **11** are preferably integral and the seat is supported above the bottom **16** of the fuselage by means of supports **17***a*.

The fuselage is provided with a front panel **17** and a rear panel **18** on opposite ends thereof. The rear panel **18** is provided with a bushing **19** extending therethrough, and within this bushing there is provided a rearwardly extending bolt **20** provided on its outer end with a nut **21**. This bolt extends through and is supported by an inverted U-shaped tube **22** at about the center thereof, with the opposite ends of the tube extending downwardly and away from each other. Located immediately beneath the bolt **20** and attached to the rear panel **18** is a rearwardly extending rubber covered pin **23** of sufficient

length so that it extends into the space between the ends of the tube **22**.

Mounted on the front panel **17** is a similar bushing **24** that rotatably supports the front end of a combined attaching member and oscillation control member in the form of a metal rod **25**. The front end of this rod extends through the bushing **24** and through a second inverted U-shaped tube **26** of a shape and dimension substantially the same as those of the first tube **22**. The extreme forward end of the rod **25** is provided with a nut **27**. Beneath the bushing **24** there is provided a second pin **28** extending forwardly between the downwardly diverging arms of the tube **26**. The pins **23** and **28** provide a means for limiting the oscillation of the fuselage about the axis of the bolt **20** and rod **25**.

Located in the forward portion of the cockpit **13** is a dashboard **29**. Positioned in this dashboard is a bushing **30** through which the metal rod **25** extends. The portion of the rod **25** on the cockpit side of the dashboard **29** is provided with an upwardly extending arm portion **25***a* having secured to the upper end thereof a hand grip **31**.

The portion of the rod **25** between the front panel **17** and the dashboard **29** is substantially aligned with the bolt **20** and the rod and bolt are located above the center of gravity of the fuselage **10**. Because of this, the fuselage is in effect suspended for oscillation about an axis that is determined by the rod **25** and bolt **20**. The extent of oscillation is controlled by the pins **23** and **28**, which engage the arms of the tubes **22** and **26** at the ends of the path of oscillation.

In order to hold the fuselage against oscillation, such as when the rider is mounting or dismounting, there is provided a brake means, here shown as a brake rod **32**, extending through the front panel **17** and the dashboard **29** and longitudinally slidable with respect thereto. The front end of the brake rod **32** engages an opening in a transverse metal strap **33** that extends between the arms of the tube **26**. Thus, when the front end of the brake rod **32** is in engagement with this strap, the fuselage is locked against oscillation.

In order to urge the brake rod **32** into forward braking position, there is provided a compression spring **34** extending between the rear surface of the dashboard **29** and a collar **35** that is attached to the brake rod **32**. The end of the brake rod **32** on the cockpit side of the dashboard **29** is provided with a combined handle and stop **36**. When the brake rod **32** is pulled rearwardly by means of the handle **36** to disengage the forward end of the rod from the strap **33** so that the fuselage is free to oscillate the brake rod, the handle may be turned to the position shown in dotted lines in Figure 4 so that the forwardly extending end **36***a* of the handle will bear against the dashboard. In this position, the brake rod is retained out of engagement with the strap **33** so that the fuselage is free to oscillate.

In order to provide means for rocking the toy forwardly and rearwardly, there is provided a pair of metal tubes **37** and **38** having bent, substantially parallel ends, as illustrated at **38***a* and **38***b*, removably telescoped within corresponding ends of the tubes **22** and **26**. The rocker tubes **37** and **38** are of substantially the same size and shape and, when in position as shown in the drawings, permit the fuselage **10** to be rocked forwardly and rearwardly on these rockers **37** and **38**. The forward portion, as illustrated at **38***c*, and the rearward portion, as illustrated at **38***d*, of each rocker is flattened as illustrated in Figures 1 and 2. This construction not only provides a safety feature to prevent the toy's rocking over on its ends but also provides a pause at each end of the rocking path which adds to the enjoyment of the rider.

The metal rod **25**, which forms a part of the attaching

member and oscillation control member, may be oscillated relative to the supporting tube **26** by means of the operating arm **25***a*. This oscillation causes oscillation of the fuselage **10** by means of an activating portion, here shown as a transverse tube **39**, extending transversely of and attached to the rod **25** at a point which is in front of the dashboard **29**. This transverse tube is attached to the rod **25** so that when the rod is oscillated by means of the operating member **25***a*, the tube is also oscillated. The tube **39** has its ends resiliently attached to the fuselage **10**. In the embodiment shown, this resilient attaching is provided by a resilient, elongated, rubber endless strap **40** extending through the tube **39** and having each end looped over hooks **41** and **42** attached to the dashboard **29**. These hooks **41** and **42** are spaced apart on opposite sides of the axis of oscillation that is determined by the rod **25** and the bolt **20** as great a distance as possible. The resilient attaching means may be any resilient structure including springs or the like, but a rubber element similar to the rubber strap **40** is preferred because it is much quieter than springs or the like.

With this construction and with the parts in the position shown in Figure 2, the child using the toy may enter the cockpit **13** by stepping on a wing **11** and then enter the cockpit. The fuselage will not tip to the side because of the engagement of the brake rod **32** with the strap **33**. After the child has seated himself on the seat **14**, he releases the brake by pulling rearwardly on the handle **36** and turning it in either a clockwise or counterclockwise direction so that when he releases the handle, the end **36***a* will bear against the dashboard **29**. Thus, he moves the rod **32** against the urge of the spring **34**. The collar **35** and the spring **34** prevent the rod from being drawn rearwardly an excessive distance.

When the brake is thus released, the rider can cause the toy airplane to perform a number of different operations. Thus, by throwing his weight rearwardly and forwardly, he can rock the airplane upon its rockers **37** and **38**. Because of the flattened portions illustrated at **38***c* and **38***d* on the rockers, he will get a pause momentarily at each end of the rocking movement. These pauses add to the illustion that the child is flying with swoops and glides.

In addition to the rocking movement, the child may also provide a controlled sideways swinging or oscillating movement. This is brought about by manipulation of the operating member here shown as the upturned arm portion **25***a*. Thus, by turning the arm **25***a* to one side of its upward position, the transverse tube **39** is turned to a corresponding position. This stresses each end of the rubber strap **40** against the hooks **41** and **42** and thus exerts a torque on the fuselage to cause the fuselage to oscillate to a corresponding direction. Thus, as is illustrated in Figure 3, the tube **39** may be turned in a counterclockwise direction by movement of the arm **25***a* in a corresponding direction to the position shown in dotted lines in this figure. The resilient rubber strap then pulls the fuselage to a corresponding direction. With this construction, the rider of the toy may control the direction and extent of movement of the airplane.

As can be seen, the combined oscillating and rocking movement give the child an illusion of controlled movements through space. Furthermore, because of the provision of the resilient connecting strap **40**, the oscillation movement comes about only after a short pause following movement of the control arm **25***a*. This gives the illusion of an airplane responding to its controls. Furthermore, because the airplane follows the movement of the control arm **25***a*, this arm has an action similar to the control stick of a conventional airplane.

Having described my invention as related to the embodiment shown in the accompanying drawings, it is my intention that the invention be not limited by any of the details of description, unless otherwise specified, but rather be construed broadly within its spirit and scope as set out in the accompanying claims.

I claim:

1. A riding toy comprising: a body having a rider supporting portion; a support for said body having supporting portions on opposite sides thereof supporting the body for oscillation about an axis; a first attaching member on one side of said body attaching the body and one supporting portion for oscillation of the body; an oscillation control member having an extending portion in said body at substantially the axis of oscillation oscillatably engaging the body and the supporting portion on the other side of said body, said control member having an operating member accessible from said rider supporting portion extending transversely to said axis; means operatively attaching said control member to said body whereby movement of said member oscillates said body; and means for limiting the extent of oscillation of said body.

2. A riding toy comprising: an elongated body having a rider supporting portion intermediate the ends of the body; a support for said body having supporting portions on opposite ends thereof supporting the body for oscillation about an axis; a first attaching member on one end of said body attaching the body and one supporting portion for oscillation of the body; a combined second attaching member and oscillation control member having an extending portion within the body oscillatably mounted with respect to the body including an end extending from the body and oscillatably engaging the second supporting portion, said control member having an operating member accessible from the rider supporting portion extending transversely to said axis, and an activating portion extending transversely to said axis and to said extending portion; resilient means attaching said activating portion to the body at spaced apart points on opposite sides of said axis for imparting oscillation movement to said body; and means for limiting the extent of oscillation of said body.

3. A riding toy comprising: an elongated body having a rider supporting portion intermediate the ends of the body; a support for said body having supporting portions on opposite ends thereof supporting the body for oscillation about an axis and rockers extending between said supporting portions for rocking support of said body; a first attaching member on one end of said body attaching the body and one supporting portion for oscillation of the body; a combined second attaching member and oscillation control member having an extending portion within the body oscillatably mounted with respect to the body including an end extending from the body and oscillatably engaging the second supporting portion, said control member having an operating member accessible from the rider supporting portion extending transversely to said axis, and an activating portion extending transversely to said axis and to said extending portion; resilient means attaching said activating portion to the body at spaced apart points on opposite sides of said axis for imparting oscillation movement to said body; and means for limiting the extent of oscillation of said body.

4. The structure of claim 3 wherein said rockers have generally flattened sections at each end thereof to cause the structure to pause at each end of its rocking movement.

5. A riding toy comprising: a body having a rider supporting portion; a support for said body upon which the body is mounted for oscillation about an axis, said support including rockers forming a means for permitting rocking of said body in a direction substantially parallel to said axis, said axis extending substantially longitudinally of and above the center of gravity of said body when a rider is supported thereon; means for oscillating said body accessible from said rider supporting portion comprising a control member having an extending portion substantially coinciding with said axis oscillatably mounted with respect to said body, said control mem-

ber having an operating portion extending transversely to said axis; means operatively attaching said control member to said body whereby movement of said member oscillates said body; means for limiting the extent of oscillation of said body; and releasable braking means engaging said body and said support for preventing said oscillation.

6. A riding toy comprising: an elongated body having a rider supporting portion intermediate the ends of the body; a support for said body having supporting portions on opposite ends thereof supporting the body for oscillation about a substantially horizontal axis that extends longitudinally of said body; a first attaching member on one end of said body attaching the body and one supporting portion for oscillation of the body; a combined second attaching member and oscillation control member having an extending portion within the body oscillatably mounted with respect to the body including an end extending from the body and oscillatably engaging the second supporting portion, an operating member on said extending portion accessible from the rider supporting portion extending transversely to said axis, and an activating portion also on said extending portion positioned transversely to said axis and to said operating member; resilient means attaching said activating portion to the body at spaced apart points on opposite sides of said axis; means for limiting the extent of oscillation of said body; and releasable braking means engaging said body and said support for preventing said oscillation.

7. A riding toy comprising: an elongated body having a rider supporting portion intermediate the ends of the body; a support for said body having supporting portions on opposite ends thereof supporting the body for oscillation about a substantially horizontal axis that extends longitudinally of said body and rockers extending between said supporting portions for rocking support of said body; a first attaching member on one end of said body attaching the body and one supporting portion for oscillation of the body; a combined second attaching member and oscillation control member having an extending portion within the body oscillatably mounted with respect to the body including an end extending from the body and oscillatably engaging the second supporting portion, an operating member carried on said extending portion accessible from the rider supporting portion extending transversely to said axis, and an activating portion also carried on said extending portion extending transversely to said axis and to said operating member; resilient means attaching said activating portion to the body at spaced apart points on opposite sides of said axis; means for limiting the extent of oscillation of said body; and releasable braking means engaging said body and said support for preventing said oscillation including a longitudinally slidable brake rod in said body engaging an opening in one of said supporting portions.

8. A riding toy adapted to be activated by movements of the rider, comprising: a body having a portion receiving and supporting a rider; a support upon which the body is mounted for oscillation from side to side about an axis extending longitudinally of and intersecting the body; an elongated oscillation control member mounted on said body and engaging said body and said support said control member extending longitudinally of the body and oscillatable relative to the body about its own axis by a rider on said rider receiving portion, the oscillation control member including a rider manipulatable portion accessible from said rider supporting portion and an offset portion extending away from the axis of oscillation of the control member; and means movably connecting said offset portion to said body at an area spaced from said body axis and said control member axis for exerting a torque on said body about said body axis when the oscillation control member is oscillated by the rider about the control member axis.

9. The riding toy of claim 8 wherein said connecting means includes a resilient member.

10. A riding toy adapted to be activated by movements of the rider, comprising: a body having a portion receiving and supporting a rider; a support upon which the body is mounted for oscillation from side to side about an axis extending longitudinally of and intersecting the body, said support including rockers beneath the body providing a means for normally rockingly supporting the body on a floor for rocking the body forwardly and rearwardly substantially in the direction of said body oscillation axis; an elongated oscillation control member mounted on said body and engaging said body and said support, said control member extending longitudinally of the body and oscillatable relative to the body about its own axis by a rider on said rider receiving portion, the oscillation control member including a rider manipulatable portion accessible from said rider supporting portion and an offset portion extending away from the axis of oscillation of the control member; and means movably connecting said offset portion to said body at an area spaced from said body axis and said control member axis for exerting a torque on said body about said body axis when the oscillation control member is oscillated by the rider about the control member axis.

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