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I. G. DAVIS

WHEELED TOY ANIMAL

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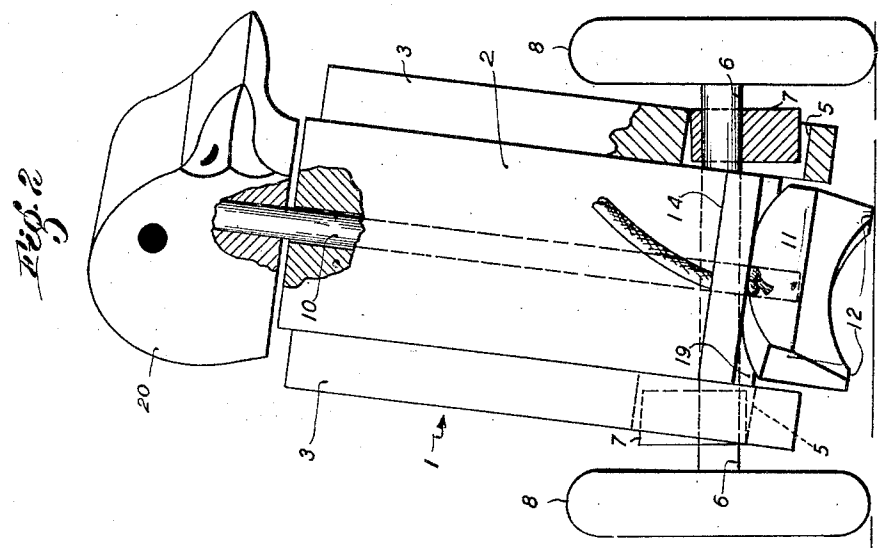


Fig. 2

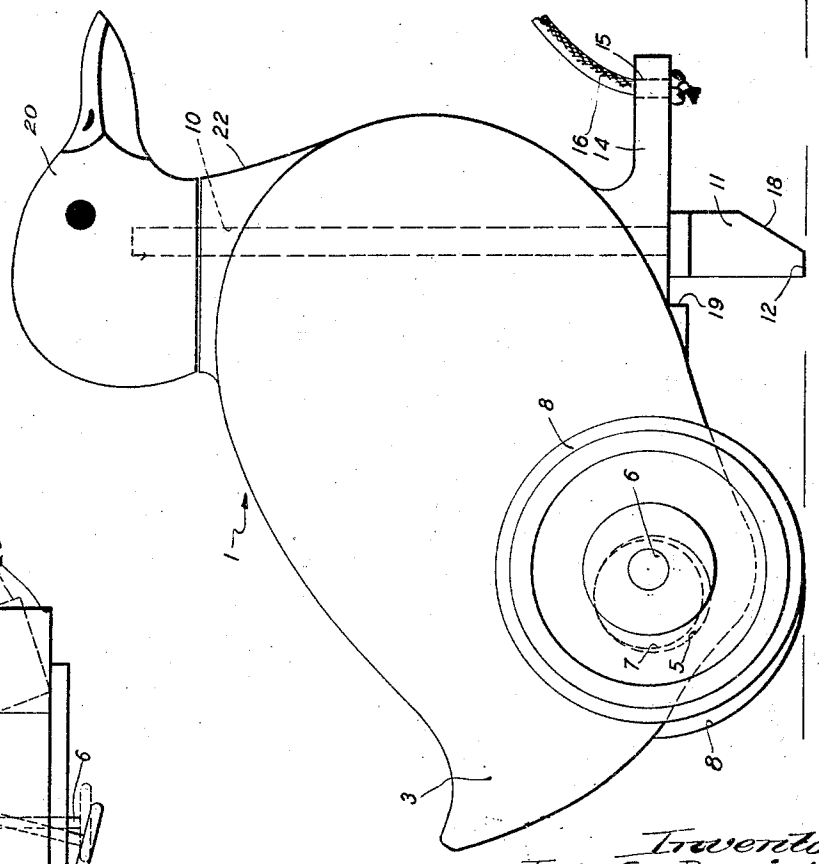


Fig. 1

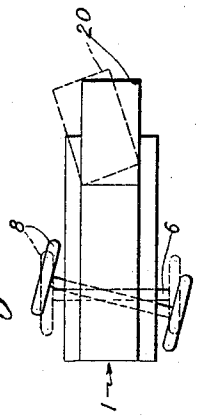


Fig. 3

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UNITED STATES PATENT OFFICE.

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WHEELED TOY ANIMAL.

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This invention relates to toy animals and particularly to articles of this character which are adapted to be drawn along upon a supporting surface, such as a floor, sidewalk, or the like.

The present invention provides a toy animal and more specifically a toy duck, which may be inexpensively manufactured out of a few wooden parts and which is simple and sturdy in construction. This toy may be used either indoors or outdoors, and is free from parts which are likely to hurt the child. Furthermore, a toy of this character may be comparatively simple and elementary in its outline, resembling a duck or other animal, without providing an exact replica of the same, thus appealing to and stimulating the imagination of the child user.

Specifically the present invention comprises a toy duck having a body portion which is eccentrically mounted in relation to supporting rollers, so that movement of the toy over the floor or other supporting surface will cause the body to rock transversely, thus affording an imitation of the characteristic waddle of animals of this character. In conjunction with the supporting rollers I provide a secondary supporting member, having portions adapted alternately and intermittently to engage the floor or other supporting surface in response to movement of the toy over the same. This secondary support or control member may be connected to the head or other movably mounted part of the animal, to turn the same from side to side, in response to the movement of the body portion of the toy. Consequently the present invention affords a simple, attractive, rather whimsical appearing toy, which is inexpensive to manufacture and which is adapted to endure considerable abuse in the hands of its young user.

The above and further objects and advantageous features of the invention will be apparent upon a reading of the subjoined description and claims in conjunction with the accompanying drawings, in which:

Fig. 1 is a side elevational view of the toy;

Fig. 2 is a front view of the same; and

Fig. 3 is a top view, more or less diagrammatic in character.

A toy of the type exemplified in the accompanying drawings may preferably have a body portion 1 consisting of a central block 2 and side pieces 3. This body portion may be shaped and painted to afford a conventionalized representation of the body of an animal, such as a duck. The side pieces 3 depend below the central block 2, having openings 5 to receive axle 6 which extends therethrough.

The axle may be of any suitable cross section, and is provided with eccentrically disposed portions 7 which, as shown, are of cylindrical form, although obviously they may be of any suitable cam-like contour. Eccentrics 7 are oppositely disposed in relation to the axle 6, as indicated more clearly in Fig. 2. The wheels or rollers 8, which may conveniently be turned of wood, are fixed to the outer ends of axle 6, and are adapted to rotate therewith. The peripheries of these rollers preferably are provided with a convex curvature, as shown in Fig. 2, so that they may readily turn slightly away from the normal straight-ahead direction in which the toy is being drawn. Openings 5 engage the eccentrics 7 somewhat loosely in order to permit rocking of the animal body in relation to the axle and rollers.

A vertical shaft 10 is loosely mounted in the front part of body portion 1 of the toy, so that it is adapted to turn freely in relation to the same. To the lower end of this shaft is fixed a control member 11 having depending extremities 12 that are adapted intermittently and alternately to engage the supporting surface over which the duck is being drawn, while it rocks first to one side and then the other. Depending portions 12 may be made of any suitable material having a fairly high coefficient of friction, but I have found wood quite satisfactory for this purpose. The upper end of control member 11 engages the under side of a forwardly extending projection 14 from block 2 of the body portion of the duck, while a suitable stop 19 may be provided to engage the back of member 11 to limit its oscillatory movement as the portions 12 alternately engage the supporting surface. Projection 14 is provided with an opening 15 to receive a cord 16 by which the toy may be drawn. The lower front portion of member 11 preferably is beveled, as designated by numeral 18, so that the device will pass over minor projections or irregularities in the supporting surface. The member 11 also forms a secondary support, cooperating with the

wheels 8 in holding the body in proper position above the floor as well as causing the swinging of the duck's head.

The upper end of shaft 10 is fixed within a movable head 20, which may be suitably painted to provide a conventionalized representation of the corresponding part of the animal. Block 2 is extended upwardly, as designated by numeral 22, to represent the neck of the duck and to afford a flat surface upon which the lower part of the head may rest.

It is evident that a device of this character may be economically manufactured of inexpensive materials, for example all of the parts may be made of wood suitably glued, nailed or otherwise secured together, the several parts being readily shaped upon conventional woodworking machinery.

In the use of this toy, it is evident that the duck is drawn along a floor, sidewalk or other supporting surface by the string 16. As a consequence of the eccentric mounting of the roller support, the body portion 1 rocks from side to side, such action being permitted by the loose engagement of the openings 5 with the cam members 7. When the body portion has tilted considerably to one side, the opposite part of control member 11 is lifted out of engagement with the supporting surface and the adjoining portion 12 tends to be retarded by frictional engagement with this surface, so that member 12 is oscillated about the axis of shaft 10, the head 20 being similarly pivoted so that the head swings to one side as the body rocks toward that side; this position of the parts is shown more particularly in Fig. 2. It is evident that the member 11 engages stop 19 to limit its swinging movement, whereupon the part 12 may slide along the supporting surface for a little way until the body portion has swung toward its central or upright position, whereupon the parts 12 both engage the floor or other supporting surface and the head becomes aligned with the body. Obviously continued movement of the animal then causes the control member and head to swing in the opposite direction.

In addition to the rocking of the body portion in a plane substantially perpendicular to the direction of movement of the toy, there is also a swinging movement in a plane substantially parallel to the direction of toy movement, both of these swinging movements being in response to the eccentric arrangement of the roller support and gradually merging into each other in alternate succession. Thus, when the rollers and eccentrics are disposed in the full line position of Fig. 3, and as shown in Fig. 1, the axle will be at a considerable horizontal angle in relation to the body portion; accordingly, the front end of the body ordinarily tends to swing from side to side in relation to the direction of movement, (the elements 12 sliding laterally to permit this movement) while the rollers will also alternately tend to turn toward one side or the other somewhat, due to the eccentric arrangement. The combined effect of the various irregular movements of the body thus results in an exceedingly whimsical, yet realistic resemblance to the natural waddle of ducks or animals of this character.

I claim:

1. A toy animal comprising a body portion, a transversely oscillatable part mounted on the body portion, rollers supporting the body portion, said rollers being eccentrically mounted to cause transverse rocking of the animal as it is moved over a supporting surface, means carried by the body portion for intermittently engaging the supporting surface in response to said rocking movement, said oscillatable part being connected to said means to be actuated thereby.

2. A toy animal comprising a body portion, rollers supporting the body portion, said rollers being connected by an axle, said axle carrying oppositely-disposed cam portions loosely engaging opposite sides of the body portion to cause transverse swinging of the animal as it is moved over a supporting surface, means carried by the body portion for intermittently engaging the supporting surface in response to said rocking movement, and a movable part connected to said means to be actuated thereby.

3. A toy animal comprising a body portion, a movable part mounted on the body portion, rollers supporting the body portion, said rollers being eccentrically mounted to cause transverse rocking of the animal as it is moved over a supporting surface, a control member having its mid-portion pivoted to the body portion and its ends arranged to engage intermittently and alternately the supporting surface in response to said rocking movement, said movable part being connected to said control member to be actuated thereby.

4. A toy animal comprising a body portion, a movable part mounted on the body portion, rollers supporting the body portion, said rollers being eccentrically mounted to cause transverse rocking of the animal as it is moved over a supporting surface, a control member having its mid-portion pivoted to the body portion and its ends arranged to engage intermittently and alternately the supporting surface in response to said rocking movement, and a pivot shaft supporting said control member, said movable part being connected to said shaft to be actuated thereby.

5. A toy duck comprising a body portion, spaced axle receiving elements upon said body portion, an axle having eccentrically mounted portions engaging said elements, a head pivoted to said body portion, a floor engaging member pivoted to the body portion and having depending end portions alternately to engage the floor, a shaft extending vertically

through said body portion and carrying a head upon its upper end and the floor engaging member upon its lower end, whereby the head is swung in response to the rocking movement of said body portion.

6. A toy duck comprising a body portion, spaced axle receiving elements upon said body portion, an axle having eccentrically mounted portions engaging said elements, a head pivoted to said body portion, and means adapted alternately to engage the floor at either side of the center of the body portion in response to the transverse rocking of the body portion in that direction, said head being connected to said means whereby the head is swung in response to the transverse rocking of the body portion as it is drawn over said floor.

Signed by me at Laconia, N. H., this 28th day of February, 1928.

IRA G. DAVIS.