May 5, 1942. H. G. FISHER 2,282,179

ACTION TOY

Filed Oct. 9, 1940

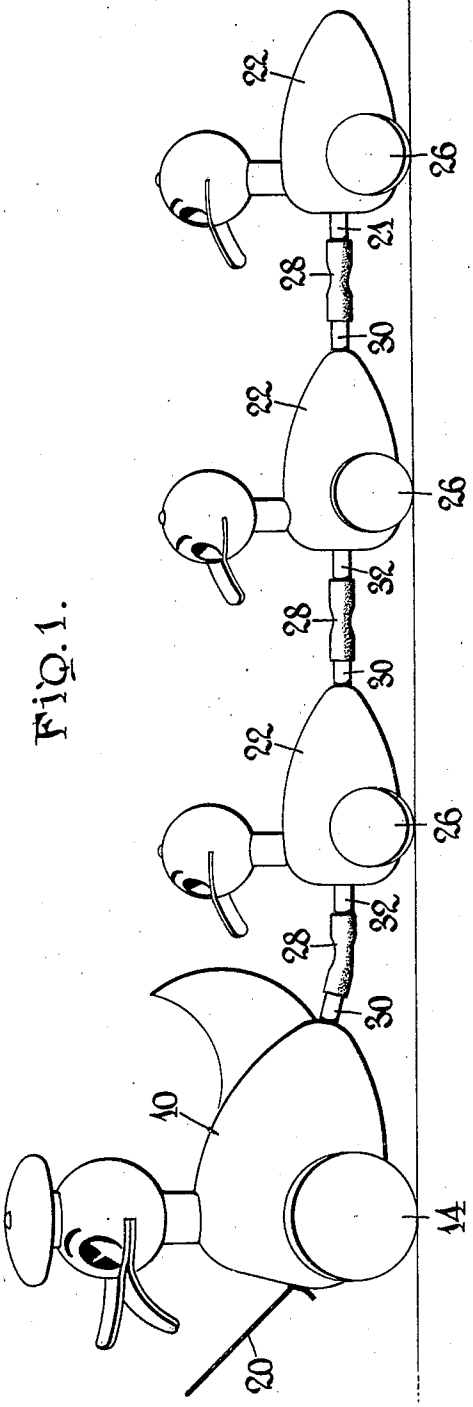


Fig. 1.

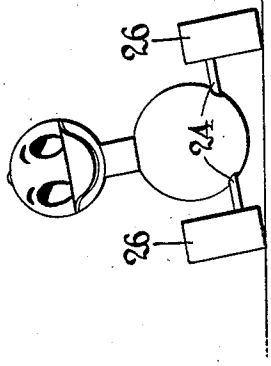


Fig. 3.

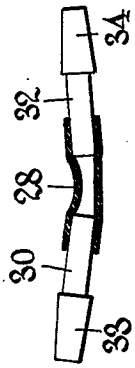


Fig. 4.

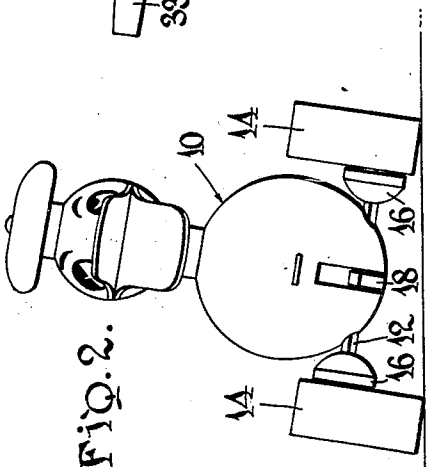


Fig. 2.

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ACTION TOY

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Application October 9, 1940, Serial No. 360,435

3 Claims. (Cl. 46—103)

This invention relates to action toys, and has for its primary object the provision of an improved action toy providing a novel form of action toy movement. Other objects and advantages of the invention will appear from the specification herein.

In the drawing:

Fig. 1 is a side elevation of a toy of the invention;

Fig. 2 is a front elevation of an element thereof;

Fig. 3 is a front elevation of another element thereof; and

Fig. 4 is a view partly in elevation and partly in section, on an enlarged scale, of a detail thereof.

The invention is illustrated as comprising a plurality of toy elements so formed and arranged as to provide, in combination, an improved action toy of simple and sturdy construction and which is capable of amusing performance in a novel and improved manner. The form of the toy illustrated in the drawing comprises a first body member 10 which is formed to an outer appearance simulating an animal, and is supported upon an axle member 12 rotatably carried by the body member and disposed transversely thereof. The axle 12 is provided at its opposite ends with traction wheels 14, and spacers 16 are threaded upon the axle 12 between the body member 10 and the wheels 14 to insure clearance of the wheels relative to the body member.

The wheels 14 are eccentrically mounted upon the axle 12; the eccentricity of the wheels 14 being opposite to one another, as shown in Fig. 2. A spring finger 18 is fixed upon the axle 12 so as to rotate therewith and to intermittently strike against a sound producing portion of the body member 10 upon each revolution of the axle to provide suitable sound effects. A pull string 20 is fixed to the front end of the body member 10 for manual pulling of the toy across a suitable supporting surface.

A plurality of body elements 22 are connected in articulated relation to the body member 10 so as to trail therebehind upon pulling of the cord 20. The body elements 22 are also formed to simulate in external appearance an animal figure, and each body member 22 carries a transverse rotatable axle 24 which in turn mounts at its opposite ends traction wheels 26. The traction wheels 26 are smaller in diameter than the wheels 14 and are also eccentrically mounted upon their respective axles in the manner described in connection with the traction wheels 14. The connections between the body elements of the toy comprise, in each case, a resilient tubular link 28 formed of rubber or the like, and engage at opposite ends with a stud 30 extending from the forwardly located body element and similar studs 32 extending from rearwardly disposed body elements of the toy combination. The studs 30 and 32 are provided with tapering end portions 33 and 34, respectively, which are adapted to be frictionally fitted into suitable corresponding openings formed in the corresponding connected body elements. The connections between the link members 28 and the connecting stud portions are fixed so that the connection devices are capable of transmitting the pulling forces required to draw the toy across the supporting surface. Also, the body elements of the toy combination are thereby yieldingly maintained in longitudinal and torsional alignment.

However, it will be understood that due to the eccentricity of the traction wheel mountings under the respective body elements, the different body elements thereof will oscillate separately about the longitudinal axis of the toy and about both axes transversely thereto as the toy is drawn across a supporting surface. For example, the oppositely eccentric mountings of the wheels 14 cause the body member 10 to oscillate about the axle 12 with a universal movement, and at the same time the next adjacent body member 22 is caused to oscillate with a universal movement. However, since the wheels 14 and 26 are of different diameters the periods of oscillation of the body members 10 and 22 differ substantially, and therefore the relationship of the oscillations of the body member 22 with respect to the body member 10 are constantly changing. Consequently, the toy combination will move in such manner as to simulate a group of independently moving animate bodies; and, for example, as illustrated in the drawing, the group may be designed so as to imitate the appearance of a family of ducklings waddling along in line behind an adult duck. However, it will be understood that the toy elements thereof may be formed with equal facility to simulate any other desired animal types, or animate or inanimate objects.

Particular attention is called to the fact that the resilient form of the link members 28 provides a novel stability of alignment of the body elements of the toy, and that although the connections therebetween are sufficiently flexible to permit adjacent body elements thereof to oscil-

late in opposite directions under the influence of the eccentric mountings thereof, the connections at all times tend to return the body elements into alignment. Thus, the individual body elements of the toy are not normally subject to being upset from wheeling positions upon the supporting surface, and the toy possesses generally the form of an easily handled single unit.

Although only one form of the invention has been shown and described in detail, it will be apparent to those skilled in the art that the invention is not so limited but that various changes may be made therein without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A traction toy comprising a leading figure and a following figure, eccentric traction wheels at opposite sides of the leading figure secured for joint rotation, the wheels at opposite sides of said figure having opposed eccentricity whereby said leading figure when moved forwardly along a surface pursues an undulating course, said following figure having a pair of eccentrically mounted traction wheels likewise of opposite eccentricity and a resilient self-centering connection with said leading figure, whereby the undulating course of said leading figure is transmitted in modified form to said following figure and the path of movement of said following figure is compounded of the transmitted undulations and the opposite eccentricity of its own wheels.

2. A traction toy comprising a leading figure and a following figure, eccentric traction wheels at opposite sides of the leading figure secured for joint rotation, the wheels at opposite sides of said figure having opposed eccentricity whereby said leading figure when moved forwardly along a surface pursues an undulating course, said following figure having a pair of eccentrically mounted traction wheels of opposite eccentricity and of smaller diameter than the wheels of the leading figure, a resilient self-centering connection between the rear of said leading figure and the front of said following figure, whereby the undulating course of said leading figure is transmitted in modified form to said following figure and the path of movement of the following figure is compounded of the transmitted undulations of the leading figure and smaller undulations caused by the opposite eccentricity of its own wheels.

3. A traction toy comprising a leading figure and a plurality of smaller following figures, said several figures being connected in end to end relation by resilient self-centering means, an eccentric traction wheel at each side of said leading figure, the wheel at one side of said figure having opposed eccentricity with respect to the wheel at the other side thereof and said two wheels being secured for joint rotation whereby said leading figure when moved forwardly along a surface pursues an undulating course, said following figures each having a pair of traction wheels smaller than the wheels of said leading figure and likewise mounted for joint oppositely eccentric rotation, whereby the undulating course of said leading figure is transmitted in modified form to said following figures and the path of movement of each of said following figures is compounded of the transmitted undulations and the opposite eccentricity of its own wheels.

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