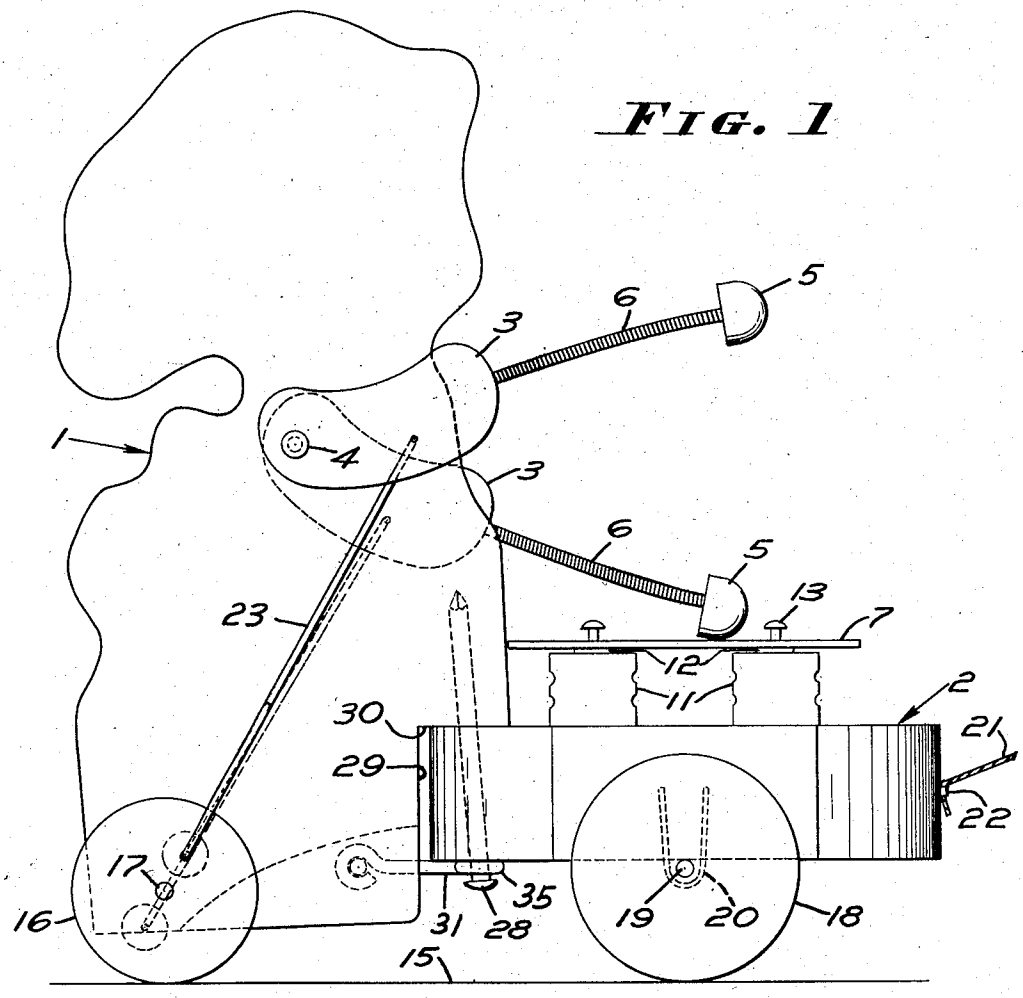
April 28, 1959 R. W. CRAWFORD 2,883,793

ACTION TOY

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FIG. 1



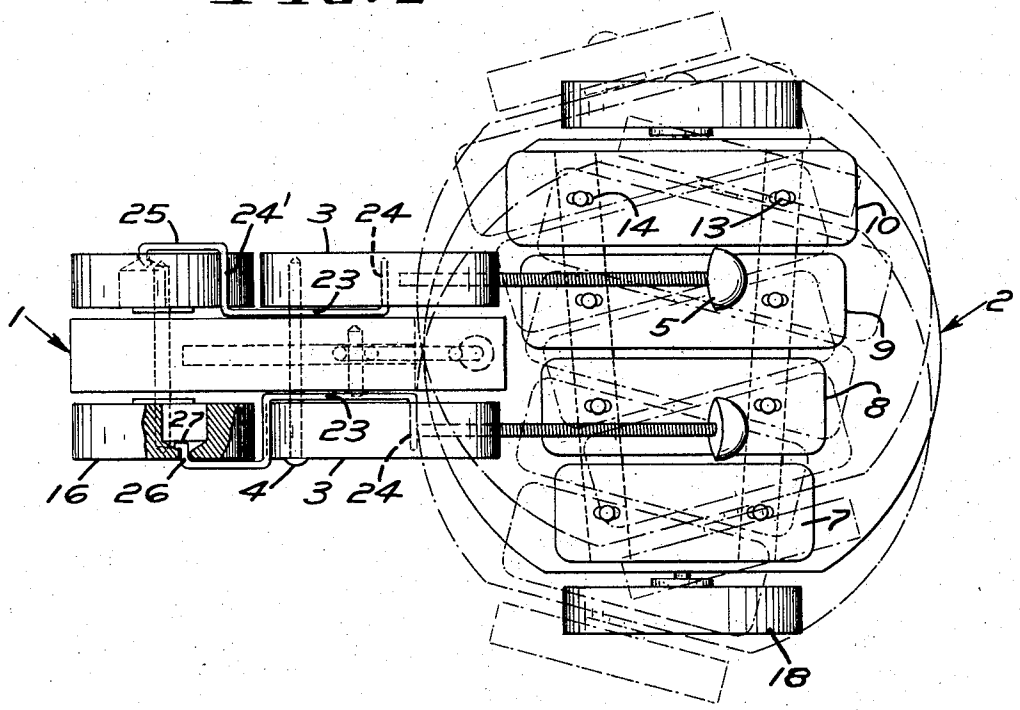
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FIG. 2



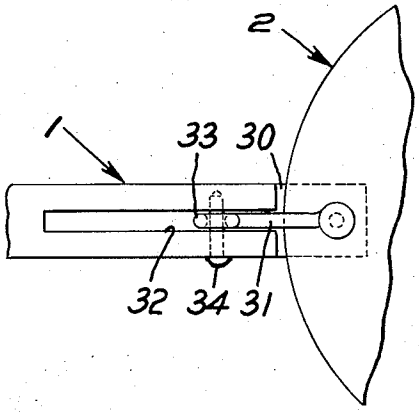


FIG. 3

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ACTION TOY

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5 Claims. (Cl. 46—99)

This invention relates generally to the amustment device art, and more specifically to a new and useful action toy for young children.

This invention is particularly concerned with action toys of the type having one or more movable members actuated by rolling the toy along a supporting surface to strike one or more of a number of musical sound producing means in a manner producing musical sounds varying as to pitch, tone or the like.

Heretofore it has been the practice to provide means for actuating the strikers both toward and away from the musical sound producing means and crosswise thereof, causing the strikers to hit different ones of the sound producing means as the toy is rolled along a supporting surface. However, such actuating means are necessarily relatively complicated, add to the cost of the toy, and present other difficulties.

Accordingly, it is a primary object of this invention to provide an action toy having one or more striker elements and greatly simplified means for actuating the same to strike different ones of a number of musical sound producing means, such as xylophone bars, to vary the sound produced thereby.

Another object of this invention is to provide an action toy having one or more strikers, a number of sound producing elements, and means causing the strikers to hit different ones of said elements while moving in only one direction relative thereto.

Another object of this invention is to provide the foregoing in a toy which is durable and safe for use by very young children.

Still another object is to provide the foregoing in a toy which is of simple construction, using relatively inexpensive parts which are readily fabricated and assembled.

An action toy constructed in accord with this invention is characterized by the provision of a support having one or more strikers mounted thereon for movement relative thereto back and forth in a first direction, a platform carrying different sound producing means mounted beneath the strikers for movement relative to the support in a second direction so as to present different ones of the sound producing means to the strikers, means such as wheels mounting the toy for movement along a supporting surface, and means actuating the strikers upon such movement of the toy.

The foregoing and other objects, advantages and characterizing features of an action toy constructed in accord with this invention will become clearly apparent from the ensuing detailed description of a presently preferred embodiment thereof, taken together with the accompanying drawing illustrating such embodiment and forming a part hereof wherein like reference numerals denote like parts throughout the various views and wherein:

Fig. 1 is a side elevational view of a presently preferred embodiment of the invention;

Fig. 2 is a plan view thereof, with certain parts broken away to show details and with different positions of the

musical sound producing means relative to the strikers indicated by broken lines; and

Fig. 3 is a fragmentary bottom plan view showing details of the king pin connection between the platform carrying the musical sound producing means and the support.

The presently preferred form of action toy constructed in accord with this invention, shown in the accompanying drawing, comprises a normally generally vertically upright body member or support **1**, and a normally generally horizontal platform **2**. Support **1** preferably is figured and will have ornamentation applied thereto, as for example by means of lithographs, to resemble in caricature an animal or the like as is known in the art. A pair of limbs **3**, in this case resembling arms, are pivotally connected adjacent one end thereof to opposite sides of support **1** as by means of a pin or nail **4**, whereby they are adapted to swing up and down above pivot **4** relative to support **1**. At their other ends, limbs **3** carry strikers in the form of mallets **5** joined thereto as by coil springs **6**, thereby providing resiliently flexible striking elements comprising the outer extremities of limbs **3**.

Mallets **5** are adapted, upon pivoting of limbs **3**, to strike musical sound producing means carried by platform **2**. In the illustrated embodiment, such means comprise xylophone bars **7**, **8**, **9** and **10**, each adapted to produce a musical tone of different pitch, upon being hit by mallets **5**, and each suspended across a pair of spaced apart supports **11** which support them off platform **2**. Bars **7**, **8**, **9** and **10** rest on felts **12** on the top surface of support members **11**, and are loosely held in position across members **11** as by pins **13** extending through slots **14** in the bars.

Body member **1** is supported for rolling movement along a supporting surface **15** as by a pair of wheels **16** carried by an axle **17** journaled in body member **1**, and platform **2** is supported for rolling movement therewith along surface **15** as by wheels **18** carried by an axle **19** journaled on platform **2** by a pair of staples **20** secured to the underside thereof. The toy is adapted to be pulled along supporting surface **15** by means such as for example a pull string **21** secured to the front surface of platform **2** as by a staple **22**.

Limbs **3** are reciprocated up and down about pivot **4**, to cause mallets **5** to strike bars **7**, **8**, **9** and **10**, in response to movement of the toy along supporting surface **15**, this being accomplished by means of links **23** extending along the opposite sides of body member **1** and having at their upper ends outturned flange portions **24** extending into openings in limbs **3** at points spaced forwardly of pivot **4**. At their lower ends, links **23** have outwardly directed flange parts **24'** overlying wheels **16** and enabling links **23** to accommodate the same, flanges **24'** leading to downwardly directed flanges **25** terminating in inwardly directed flanges **26** which extend into openings in the outer side walls of wheels **16** at points spaced from axle **17**. Links **23** terminate at their lower ends in flanges **27** preventing accidental removal of the links **23** from the wheels.

Thus, as wheels **16** are caused to rotate they actuate links **23** to swing limbs **3** up and down about pivot **4**, thereby causing mallets **5** to strike the xylophone bars **7—10**, and for greater interest the links **23** preferably are arranged to move limbs **3** out of phase, by arranging wheels **16** so that one link **23** moves upwardly while the other thereof moves downwardly, and vice versa.

As previously noted, it has been the practice also to impart to the limbs **3** a sidewise movement, causing them to move back and forth over the xylophone bars **7—10** as they move up and down relative thereto. However, in a toy constructed in accord with this invention there is provided instead means for moving the platform **2**

relative to the support 1 in a manner to present different ones of bars 7—10 for being struck by mallets 5.

In the illustrated embodiment, this is accomplished by pivotally connecting platform 2 to support 1 by means of a king pin 28, such as a nail, which extends through the rearward portion of platform 2 into an overhanging part of body member 1 which is notched to receive the platform. King pin 28 is driven through platform 2 adjacent the periphery thereof and into body 1, being inclined slightly rearwardly to avoid splintering the body, with the rear portion of platform 2 spaced from the front wall 29 of the body member notch, the top wall 30 thereof being flat and forming a bearing surface for the flat top surface of platform 2.

King pin 28, being off-center relative to platform 2 in a direction away from pulling string 21 at the front of the toy, enables the platform to swing sidewise beneath mallets 5 as the toy is pulled along surface 15, thereby presenting different ones of bars 7—10 to mallets 5 for being struck thereby as they swing up and down. This sidewise pivoting of platform 2 occurs naturally and automatically because children of the age group for which such toys are intended usually pull them with a jerking, zig-zag motion. The leading platform partakes of this motion, swinging relative to the trailing body member 1 first to one side and then to the other, as indicated by the broken line showings in Fig. 1.

Pin 28 is further supported by a link 31 loosely fitted in a lengthwise alined groove 32 in the undersurface of body 1 and the lower part of wall 29 thereof, link 31 having at one end an eye 33 pivotally connected to body 1 in groove 32 by a pin 34, and having at its opposite end an eye 35 at right angles to eye 33 and slidable on pin 28 between the head thereof and the undersurface of platform 2. Thus, link 31 provides a limited play further connection between body member 1 and platform 2 which provides a bearing surface for platform 2 when the toy is picked up by body 1, supports the outer end of king pin 28, and in other ways reinforces the toy to better enable it to withstand the hard usage which such toys are given.

Thus, with the construction of this invention the musical sound producing elements swing sidewise about pivot 28 beneath the strikers 5 which swing only in planes generally normal thereto about pivot 4, thereby varying the tone, pitch, etc., of the sounds produced, and this is accomplished with a simple, durable and relatively inexpensive arrangement of parts.

Accordingly, it is seen that this invention fully accomplishes its intended objects, and while only a presently preferred embodiment has been described herein it is obvious that variations and modifications will occur to those skilled in the art without departing from the spirit of the invention or the scope of the appended claims.

Having fully disclosed and completely described this invention, together with its mode of operation, what I claim as new is:

1. An action toy comprising a support, a striker member pivotally connected to said support for movement about a single fixed axis, whereby said striker member is movable solely in a substantially vertical plane, a platform pivotally connected to said support for movement about a single fixed axis, whereby said platform is movable in a substantially horizontal plane, musical sound producing means carried by said platform for movement therewith relative to said support to position different portions of said musical sound producing means within the path of movement of said striker member, a plurality of wheels mounting said support and said platform for movement over a supporting surface, and link means connected between one of said wheels and said striker member and providing the sole means of actuating said striker member upon movement of said support and platform over a supporting surface.

2. Apparatus as defined in claim 1 wherein said support is provided with a notched corner, said platform being received within said notched corner, the platform being pivotally connected to said support by a headed king pin extending through the rear portion of the platform into the overhanging part of said support, and a reinforcing link means loosely connected adjacent one end to said king pin and pivotally connected adjacent the other end thereof to said support.

3. An action toy comprising a support, a pair of striker members pivotally connected to said support for movement about a single fixed axis, each of said striker members being movable solely in a substantially vertical plane, a platform pivotally connected to said support for movement about a single fixed axis, whereby said platform is movable in a substantially horizontal plane, musical sound producing means carried by said platform for movement therewith relative to said support to position different portions of said musical sound producing means within the path of movement of said striker members, a plurality of wheels mounting said support and said platform for movement over a supporting surface, a first link means connected between one of said wheels and one of said striker members, a second link means connected between another of said wheels and the other of said striker members, said link means providing the sole means of actuating said striker members upon movement of said support and platform of a supporting surface.

4. Apparatus as defined in claim 3 wherein said wheels include front and rear wheels, the rear wheels comprising a pair of spaced wheels, one of said striker members being connected by said first link means to one of said rear wheels, and the other of said striker members being connected by said second link means to the other of said rear wheels.

5. Apparatus as defined in claim 4 wherein each of said rear wheels is mounted for rotation about an axis, the connection between said first and second link means with the associated wheels being spaced from the axis of rotation of the associated wheel.

References Cited in the file of this patent

UNITED STATES PATENTS

1,481,596	Fletcher et al.	Jan. 22, 1924
2,089,885	Fisher	Aug. 10, 1937
D. 161,417	Brice	Jan. 2, 1951