March 26, 1946. W. JAFFA 2,397,266

MECHANICAL TOY

Filed Aug. 31, 1944

Fig. 1

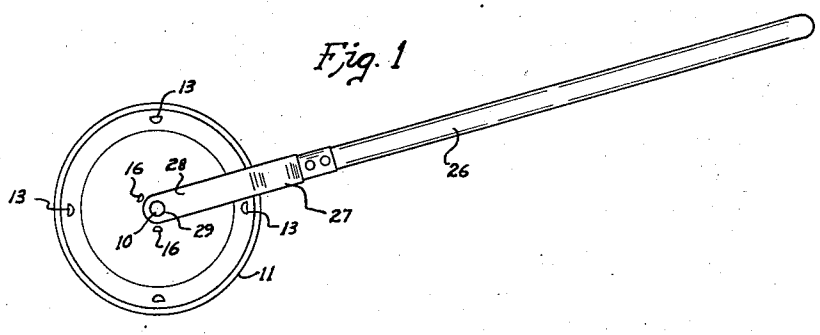


Fig. 2

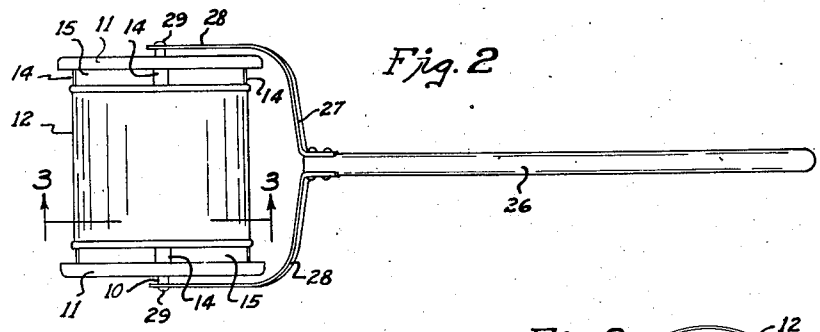


Fig. 3

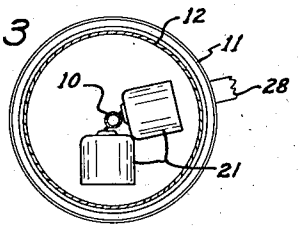


Fig. 4

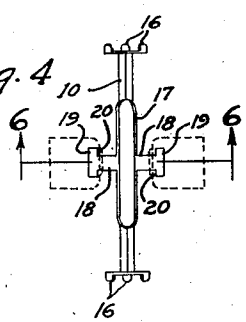


Fig. 6

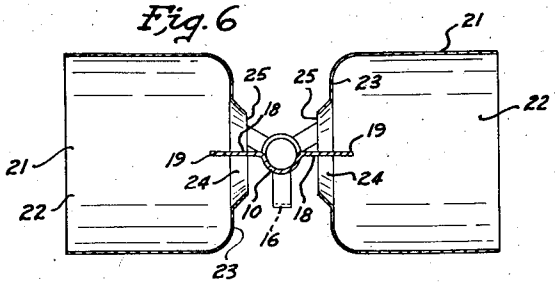
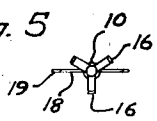


Fig. 5



Inventor
WILLIAM JAFFA
By G. H. Braddock
Attorney

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MECHANICAL TOY

William Jaffa, Minneapolis, Minn.

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7 Claims. (Cl. 46—114)

This invention has relation to a mechanical toy of the type including an axle, wheels supporting said axle and bells adapted to be struck and sounded in response to rotation of the wheels and axle of the mechanical toy, as by pushing or pulling said toy over a floor or other surface.

An object of the invention is to provide a mechanical toy of the present character which will be of new and improved construction.

A further object is to provide a wheeled mechanical toy wherein will be incorporated improved features and characteristics of construction novel both as individual entities of the mechanical toy and in combination with each other.

A further object is to provide in the wheeled mechanical toy, a novel and improved combination axle and bell support and bells assembled with said combination axle and bell support and associated with each other in novel and improved manner.

And a further object is to provide a wheeled mechanical toy constituted as hereinafter set forth.

With the above objects in view, as well as others which will appear as the specification proceeds, the invention comprises the construction, arrangement and combination of parts as now to be fully described and as hereinafter to be specifically claimed, it being understood that the disclosure herein is merely illustrative and intended in no way in a limiting sense, changes in details of construction and arrangement of parts being permissible so long as within the spirit of the invention and the scope of the claims which follow.

In the accompanying drawing forming a part of this specification:

Fig. 1 is a side elevational view of a mechanical toy made according to the invention;

Fig. 2 is a plan view of the mechanical toy of Fig. 1;

Fig. 3 is a vertical sectional view, taken on line 3—3 in Fig. 2;

Fig. 4 is a plan view of the combination axle and bell support of the mechanical toy, with parts omitted disclosing, in dotted lines, the bells of the toy as when assembled with said axle and bell support;

Fig. 5 is an end elevational view of the combination axle and bell support disclosed in Fig. 4, the bells being omitted; and

Fig. 6 is a detail sectional view of the combination axle and bell support with the bells of the mechanical toy assembled therewith, taken as on line 6—6 in Fig. 4.

With respect to the drawing and the numerals of reference thereon, the mechanical toy of the present invention includes an axle 10, spaced apart wheels 11, 11 and a cylindrical element 12 disposed in spaced, surrounding relation to the axle 10 and situated between the wheels 11, 11. More explicitly, the spaced apart wheels 11, 11 are rigidly secured, as by ears 13, in spaced relation to the cylindrical element 12 by employment of straps 14 spaced about and rigid with said cylindrical element, to provide sound escape spaces 15, 15 between said wheels and the cylindrical element, and center portions of the wheels are fixed, as by ears 16, to the axle 10. As disclosed, the straps 14 are integral with the cylindrical element 12, the ears 13 are integral with said straps 14, and the ears 16 are integral with the axle 10. The wheels 11, 11 are of equal diameter, and each wheel is of diameter greater than the diameter of the cylindrical element 12, so that when said wheels 11, 11 are rested upon a floor or other supporting surface, said cylindrical element will be in spaced relation to said floor or surface.

The axle 10 is a part of what may be termed a combination axle and bell support. That is to say, an intermediate portion 17 of said axle 10 includes integral or rigid wings 18, 18 which as shown extend radially from the longitudinal axis of the axle and are situated at diametrically opposite sides of said axle. Each wing 18 is constituted as a T-shape piece including an elongated head 19 in spaced relation to the axle 10 and extending transversely of the body of the corresponding wing, and each head 19 provides inwardly facing shoulders 20, 20 at the opposite sides of the body of the corresponding wing 18 and at the interior side of the head and parallel with and spaced from the axle 10. The wings or T-shape pieces 18, 18 are as shown of equal size and similar configuration.

The mechanical toy includes a plurality, two as shown, of hollow metal bells, each denoted 21, and each metal bell 21 is supported by one of the wings 18. More explicitly, each hollow metal bell 21 as disclosed includes a wide open exterior portion 22, which may be cylindrical, or of other shape, and at its interior side each bell includes an annular wall 23 in substantially perpendicular relation to the open portion of the bell and provided with a reduced opening 24. As shown, each opening 24 is situated axially of the corresponding hollow metal bell 21, and the an-

nular surface 25 of each annular wall 23 defining the corresponding opening 24 is of considerably less diameter than is the corresponding metal bell. As disclosed, the hollow metal bells 21 are duplicates.

The body of each wing 18 has width less than the diameter of the opening 24 in each bell 21, and the overall length of the elongated head 19 of each wing 18 is somewhat greater than a measurement representing the diameter of each opening 24. The hollow metal bells 21 are adapted to be assembled with the wings 18, in the manner as clearly disclosed in Figs. 4 and 6, so that the elongated heads 19, 19 lie within the bodies of said hollow metal bells, and the annular walls 23, 23, or more accurately, the interior portions of said annular walls, lie between the axle 10 and said elongated heads. The construction and arrangement are such that the hollow metal bells are loosely assembled with the axle for limited outward and inward and rocking movement relative to said axle. The inwardly facing shoulders 20, 20 limit outward movement of the bells and the axle 10 limits inward movement of said bells.

A handle for the mechanical toy is denoted 26, and a yoke 27 rigid with said handle includes spaced apart portions 28, 28, situated at the outer sides of the wheels 11, 11 in spaced relation to said wheels, rotatably mounted, as at 29, 29, upon the opposite end portions of the axle 10.

As will be evident, the wheels 11, 11, together with the axle 10, will be rotated when the handle 26 is pushed or pulled so that said wheels are made to roll or ride over a floor, or other supporting surface for the mechanical toy. Clearly, each hollow metal bell 21 will be suspended, by reason of gravity, when below the axle about as the lower bell 21 is shown in Fig. 3 of the drawing. With rotation of the axle 10, each bell will obviously be moved, in clockwise direction as disclosed in said Fig. 3, from position below said axle 10 to position above the axle, and, by reason of the fact that the metal bells are loosely assembled with the axle for limited rocking movement, each bell will drop, by gravity, a limited distance when caused by the axle to be moved beyond upper dead center position. The construction and arrangement will be such that as each bell drops, when just past dead center position, it will strike a bell then at lower elevation, or below the axle, thus to cause both bells to be concurrently sounded. In Fig. 3 the upper bell is disclosed as having dropped by gravity to strike the lower bell. Evidently, the axle 10 will be rotated once each time the wheels 11, 11 are made to turn through a complete revolution, and the bells 21, 21 will be caused to strike against each other twice during each revolution of said axle.

What is claimed is:

1. In a mechanical toy, an axle, wheels fixedly supporting said axle, and a plurality of spaced apart bells assembled with said axle for limited rocking movement relative to the axle, said bells being adapted to be rotated with said axle as the axle is rotated, and each bell being adapted to drop by gravity a limited distance when caused by the axle to be moved beyond upper dead center position and to strike a bell upon said axle then at lower elevation.

2. In a mechanical toy, an axle, wheels fixedly supporting said axle, and a pair of spaced apart bells loosely assembled with said axle at substantially opposite sides of the axle for limited rocking movement in a plane substantially normal to said axle, said bells being adapted to be rotated with said axle as the axle is rotated, and each bell being adapted to drop by gravity when caused to be moved beyond upper dead center position and to strike the bell upon said axle then at lower elevation.

3. The combination as specified in claim 1, and a handle rotatably supported upon said axle.

4. The combination as specified in claim 2, and a handle rotatably supported upon said axle.

5. In a mechanical toy, an axle, wheels fixedly supporting said axle, and a plurality of spaced apart bells loosely assembled with said axle for limited outward, inward and rocking movement in a plane substantially normal to said axle, said bells being adapted to be rotated with said axle as the axle is rotated, and each bell being adapted to drop by gravity a limited distance when caused by the axle to be moved beyond upper dead center position and to strike a bell upon said axle then at lower elevation.

6. In a mechanical toy, an axle, wheels fixedly supporting said axle, and a pair of spaced apart bells loosely assembled with said axle at substantially opposite sides of the axle for limited outward, inward and rocking movement in a plane substantially normal to said axle, said bells being adapted to be rotated with said axle as the axle is rotated, and each bell being adapted to drop by gravity when caused to be moved beyond upper dead center position and to strike the bell upon said axle then at lower elevation.

7. The combination as specified in claim 6, and a handle rotatably supported upon said axle.

WILLIAM JAFFA.