Feb. 6, 1945. C. W. CLARK 2,368,805

DANCING TOY

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Fig. 1.

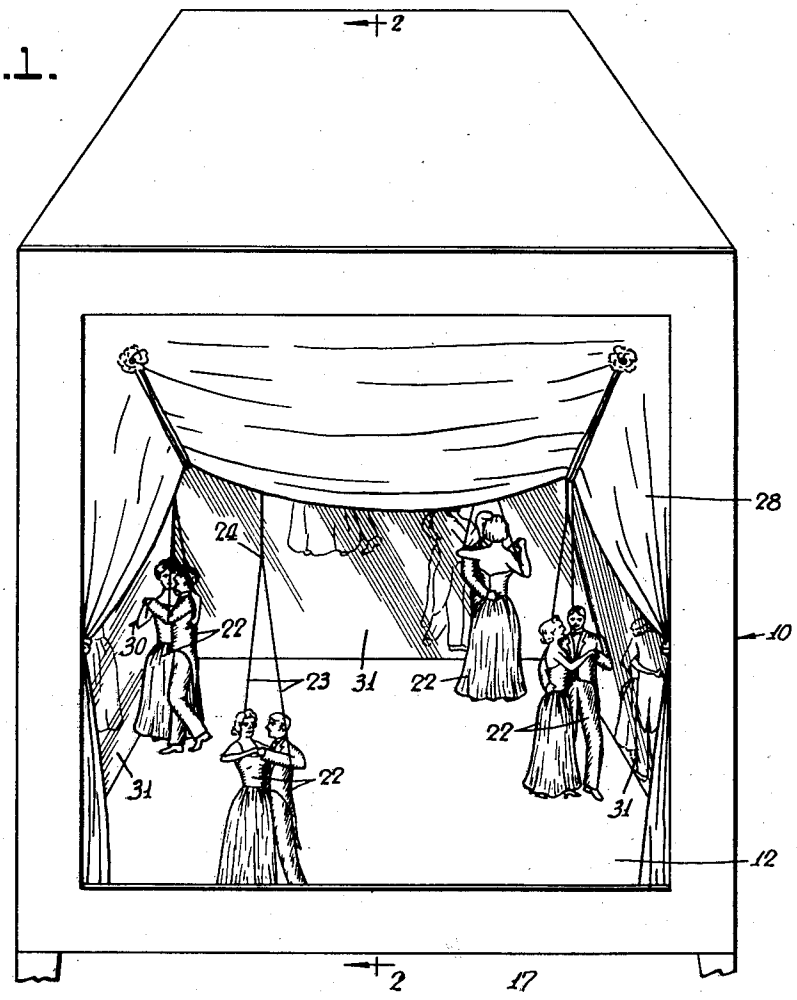
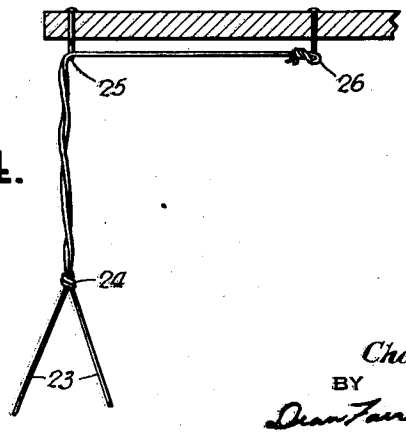


Fig. 4.



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Fig. 2.

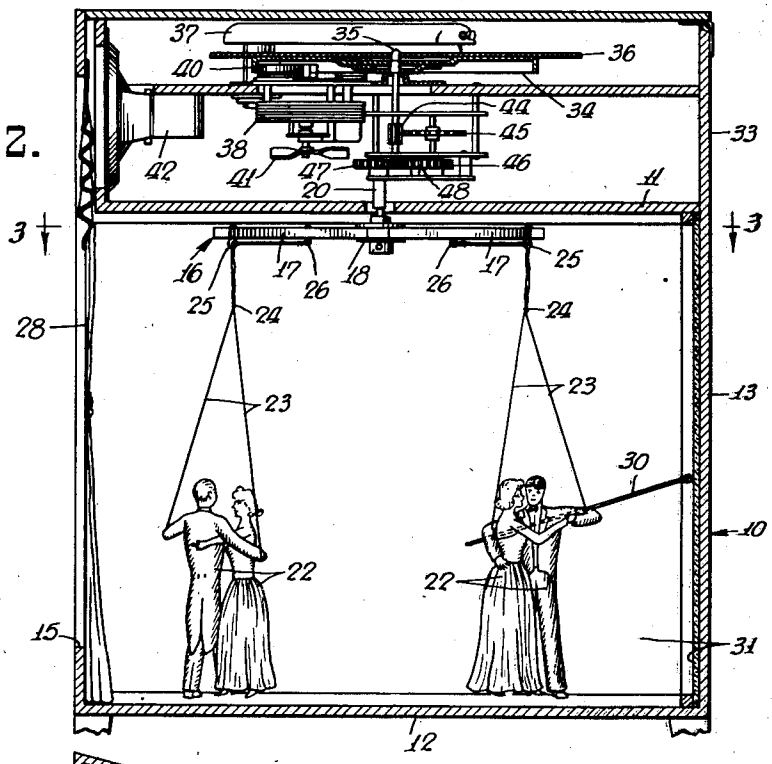
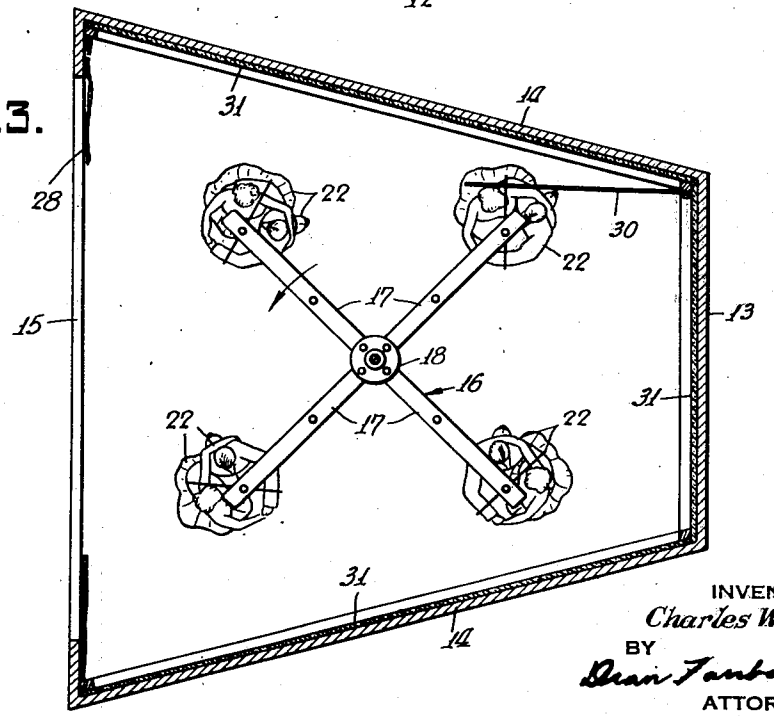


Fig. 3.



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UNITED STATES PATENT OFFICE

2,368,805

DANCING TOY

Charles W. Clark, Brooklyn, N. Y.

Application November 4, 1941, Serial No. 417,755

4 Claims. (Cl. 272—31)

The present invention relates to a toy of the type in which one or more miniature figures are supported and operated to perform dancing movements.

Among the objects of the present invention is to provide a toy in which a plurality of miniature figures, arranged as dancing couples, are supported and operated to perform smooth, graceful, gliding dance movements in a circle on a miniature stage without the stiltness generally attending mechanical toy movements; in which the dancing figures are operated in such relationship to the turntable of a phonograph as to perform dancing movements in rhythm with the music played by the phonograph; and in which the figures are made to periodically revolve in opposite directions in simulation of such round dances as waltzes, polkas, mazurkas etc.

Another object is to provide a dancing toy which can easily be made part of a coin controlled music box, to supplement the entertainment afforded by the music.

Another object is to provide a dancing toy which is entertaining, and simple but nevertheless durable in construction, and which lends itself to inexpensive manufacture.

Various other objects, features and advantages of the invention will be apparent from the following particular description, and from an inspection of the accompanying drawings, in which

Fig. 1 is a perspective somewhat in front elevation of a dancing toy assembly embodying the present invention.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Fig. 3 is a section taken on line 3—3 of Fig. 2, and

Fig. 4 is a vertical section of a part of the suspension means for the dancing figures.

In the specific form illustrated in the drawings, there is provided an enclosure 10, decorated in simulation of a miniature ballroom stage and provided with a top wall or ceiling 11, a dance floor 12, a rear wall 13, and a pair of side walls 14. The front 15 of the stage may be open or may be provided with a transparent glass panel to permit visual inspection of the interior of said enclosure. Mounted in the enclosure 10 near the ceiling 11 is a rotatable figure supporting member 16, desirably in the form of a cross-member having arms 17 extending radially from a hub 18 to which is secured a vertical shaft 20 driven in a manner to be described. Suspended from the outer ends of each of the arms 17 is a pair of miniature figures 22 arranged as a couple in ballroom dancing pose. In the form shown, each of the suspension means includes a pair of flexible strings or threads 23 connected at their lower ends at spaced points on each couple, and converging upwardly towards a knot 24 by which the two strings 23 are connected together. The two strings 23 then extend upwardly in juxtaposition over a hook or through an eyelet 25 secured to an arm 17, and then horizontally to an anchoring member 26 connected to said arm. The strings 23 are desirably very thin, and may be of transparent material or be colored black to render them almost invisible.

A curtain 28 is desirably provided at the front of the enclosure 10 to more realistically simulate a stage and to conceal the figure supporting member 16. If desired, instead of a curtain as shown, a simple valance or cornice may be employed over the top of the front stage opening to conceal said member 16.

The figures 22 clear the floor 12 so that they are freely suspended from the supporting member 16, but are close enough to said floor to give the impression of being supported by it. As the member 16 is rotated, the figures 22 are moved about the stage 10 along a circular path and will appear to be gliding in simulation of dancing.

In order to render the dancing movement of the figures 22 more realistic, there is provided a member which intermittently imparts rotation to the figures. This is shown as a prong in the form of a thin resilient wire 30 rigidly fastened at one end to one of the walls of the enclosure 10, as for instance at the intersection of the rear wall 13 and one of the side walls 14, and having its other end section in the path of movement of the figures 22 as they move in a circle about the axis of the supporting member 16. This wire 30 is desirably black or of such other color as to reduce its visibility and render it so inconspicuous that it will not be noticed by the observer of the dancing figures.

As the dancing couples are moved in a circle around the stage, they successively contact the wire 30 as shown in Fig. 3, and are revolved thereby around their own vertical axis. This revolving action results from the frictional engagement between the wire 30 and the figures 22 as they move along the wire. Also, as each dancing couple 22 is moved into engagement with the wire 30, said wire is flexed outwardly about its rear anchored end, so that when said couple reaches the free end of said wire, the spring action of the wire returning to normal unflexed position causes said free end to engage said cou-

ple and impart to it an impulse, which causes the couple to whirl. In this manner the couples will be revolved about their own vertical axes to simulate the performance of round dances. As each couple 22 is revolved by the action of the wire 30, the two converging sections of each pair of strings 23 supporting said couple are twisted together. When the revolving action of the couple due to this wire has been spent, which is preferably when the couple has moved about half-way around the stage, these string sections start unwinding and thereby revolve the couple in the opposite direction while moving over the other half of the path around the stage, thereby rendering their dancing movement more realistic. Two or more such couple rotating devices may be employed at spaced points around the stage if desired.

It should be noted that the figures 22 with their pendent support perform their dance movements with smoothness and gracefulness, and without the rigidity usually attending the movements of mechanical toys. Also, since the revolving movement of the figures in both directions is not exactly predetermined but is somewhat irregular, this adds to the realism of their dancing movements.

The rear wall 13 and the side walls 14 are desirably provided on their inner sides with mirrors 31, and the side walls 14 desirably converge towards said rear wall, so that the reflection of the figures in the mirrors 31 as viewed from the front of the stage 10 in conjunction with the direct view of the figures will give the impression of a comparatively large number of dancing couples as indicated in Fig. 1.

The supporting member 16 by which the figures 22 are moved about the stage 10 is desirably driven from a phonograph mechanism, so that the dance movement of the figures is in rhythm with the recorded music being played by said mechanism.

The phonograph per se forms no part of the present invention, and may be of any suitable standard type. In the specific form shown, this phonograph is enclosed in a housing 33 directly above the stage 10, and includes the usual turntable 34 secured to a central suitably journalled spindle 35, and adapted to support a phonograph record 36 on which the usual needle arm 37 is adapted to rest for reproducing action. This turntable 34 is driven from an electric motor 38 through a friction drive, which includes a friction wheel 40 engaging the peripheral flange of the turntable 34, and has its speed regulated by the usual governor 41. A loud speaker or amplifier 42 may be mounted to project the reproduced phonograph music through the front of the housing 33. The curtain 28 may be made to extend close to the top of the housing 33 to conceal the interior of said housing, and the loud speaker 42 may be positioned directly in back of the upper section of said curtain.

For driving the cross member 16 from the phonograph motor, there is provided a reduction gear transmission between the turntable spindle 35 and the shaft 20, which is connected to the member 16, and which extends through an opening in the stage ceiling 11 and into the phonograph housing 33. This reduction gear transmission is shown comprising a pinion 44 on the turntable spindle 35 meshing with a gear 45 on a counter shaft which carries a gear 46 driving a gear 47 on the shaft 20 through an intermediate gear 48. By means of this construction the figures 22 are moved in a circular path by the rotating action of the member 16 in synchronism with the speed of the turntable 34, so that the figures will appear to be dancing in rhythm with the music being played.

The speed of rotation of the cross member 16 depends on the diameter of the dancing circle of the figures 22, and to the type of music being played. For instance, assuming that the music played on the phonograph is in waltz time, and assuming that the speed of the phonograph record is approximately 78 revolutions per minute, then if the diameter of the dancing circle is 15 inches, I have found that a speed of 4 revolutions per minute for the member 16 will be realistically effective.

The construction of the present invention can easily be adapted for use in a coin controlled machine, and the phonographic mechanism may be of the record-changing selector type.

In order to enhance the amusement afforded by the toy, the illumination of the miniature stage ballroom 10 may be varied in intensity and color as the music is being played, to simulate the shadow and varicolored lighting sometimes employed in ballrooms. This lighting effect may be obtained in any suitable manner.

As many changes as desired could be made in the above toy, and many widely different embodiments of this invention could be made without departing from the scope of the claims, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A toy comprising a miniature figure arranged in dancing pose, a flexible string for pendently supporting said figure, a platform simulating a dancing floor for said figure, means for moving said string along a circular path to cause movement of said figure over said platform in simulation of dancing, and a flexible member in the path of movement of said figure adapted to catch said figure and revolve it about its supporting string as it moves past said member.

2. A toy comprising a pair of miniature figures arranged as a couple in dancing pose, a flexible string for pendently supporting said figures, a platform simulating a dancing floor for said figures spaced below and out of contact with said figures, means for rotating said supporting means to cause movement of said figures in a circle over said platform in simulation of dancing, and a prong in the path of movement of said figures adapted to engage said figures and revolve them about their supporting string as an axis as they move past said prong.

3. A toy comprising a plurality of spaced figures arranged in dancing pose, means for pendently and flexibly supporting said figures, a platform simulating a dancing floor for said figures, means for rotating said supporting means to cause said figures to move in a circle over said platform in simulation of dancing, and a resilient wire arranged in the path of movement of said figures and adapted to revolve said figures as they move past said wire in their circular movement over said platform.

4. A toy comprising an enclosure in simulation of a miniature stage, a member mounted in said enclosure near the ceiling thereof and rotatable about a substantially vertical axis, a plurality of pairs of miniature figures, each pair being ar-

ranged as a couple in dancing pose, strings freely and flexibly suspended in spaced relationship from said rotatable member and constituting the sole support for said figures, a platform simulating a dancing floor for said couples, means for rotating said member to cause movement of said couples in a circle over said platform and permitting said couples to sway radially of said member at the same time, and a prong in the path of movement of said couples adapted to revolve said couples in one direction as they move past said prong in their circular movement, and said figures being free to rotate in the opposite direction when out of contact with said prong.

CHARLES W. CLARK.