Feb. 7, 1950 I. HOTCAVEG 2,496,725

SIMULATED BOXING TOY

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Fig. 1.

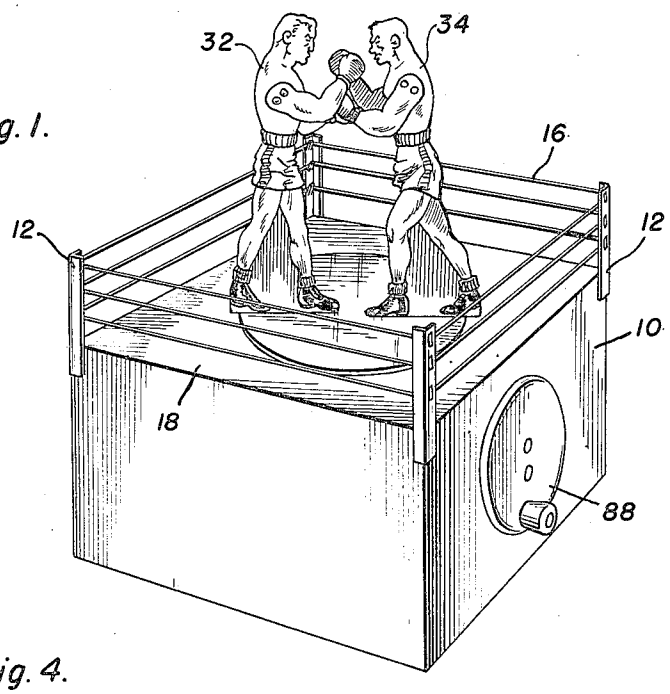


Fig. 4.

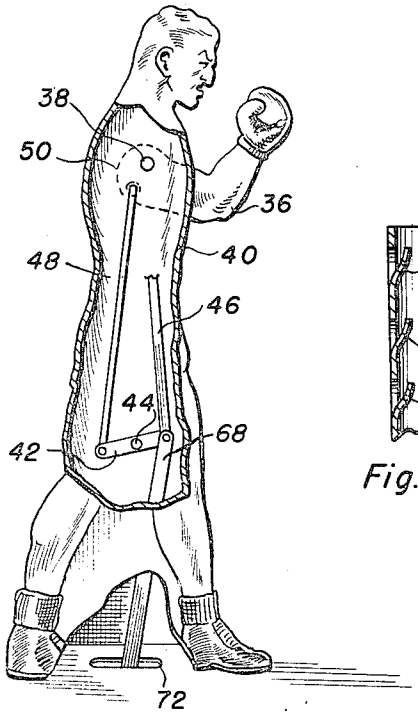
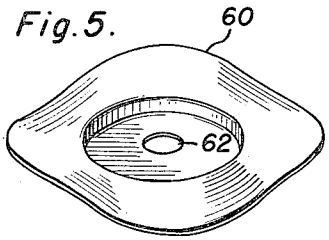


Fig. 5.



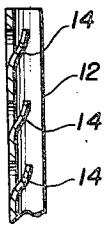


Fig. 6.

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SIMULATED BOXING TOY

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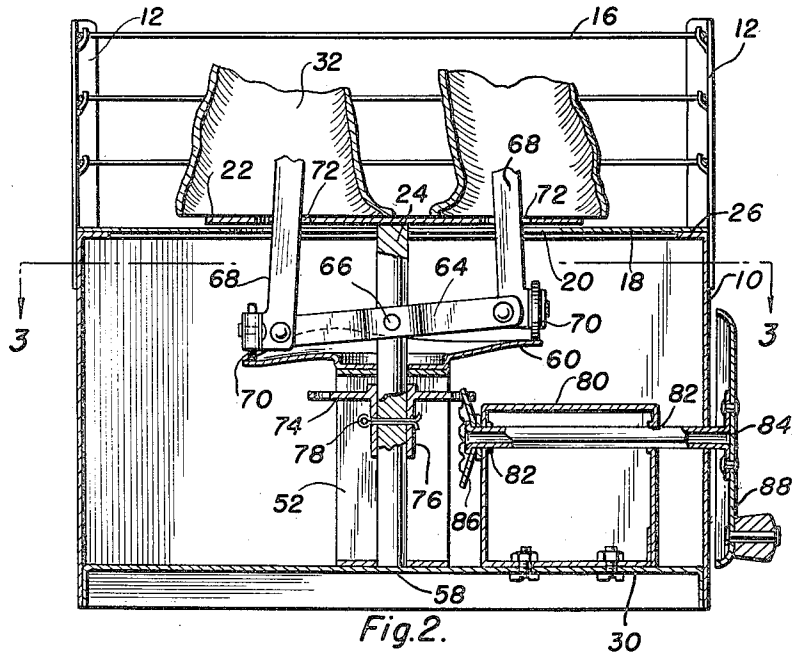


Fig.2.

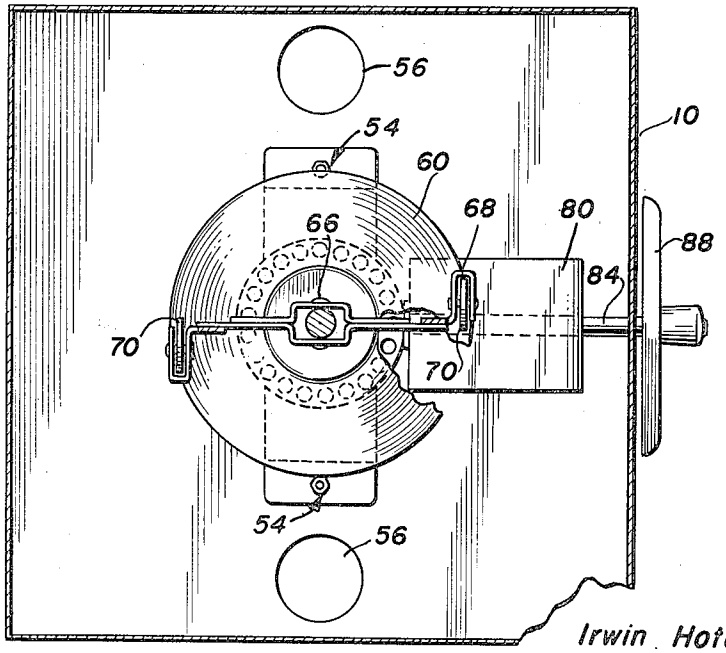


Fig.3.

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SIMULATED BOXING TOY

Irwin Hotcaveg, Chicago, Ill.

Application June 4, 1947, Serial No. 752,529

4 Claims. (Cl. 46—142)

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This invention appertains to novel and useful improvements in devices particularly developed and designed for producing amusement and pleasure to persons of many and varied environments and ages.

An object of this invention is to provide a simulated boxing ring having figurines therein which simulate boxers or participants in a boxing match.

Another purpose of this invention is to provide means for rotatably journaling the figurines in the boxing ring and also means for reciprocating the arms of the figurines in order to simulate actual punching or other aggressive movements peculiar to boxing.

Another purpose of the present invention is to provide means for reciprocating the arms of the figurines synchronously with the rotation of both of said figurines within the confines of the simulated ring.

A still further purpose of the present invention is to provide means exterior of the ring proper for actuating the arm-reciprocating means as well as the figurine turning means.

Another object of this invention is to provide an extremely simple, inexpensive and attractive device of the character described which is commercially feasible, lending itself well to common shop practice in the manufacture thereof.

Ancillary objects and features of novelty shall become apparent in following the description of the preferred embodiment of the present invention, illustrated in the accompanying drawings, wherein:

Figure 1 is a perspective view of the preferred form of the present invention;

Figure 2 is a sectional view of the invention disclosed in Figure 1;

Figure 3 is a transverse sectional view of the invention disclosed in Figure 2 and taken substantially on the line 3—3 thereof and in the direction of the arrows;

Figure 4 is an elevational view of one of the figurines used in the present invention, portions being shown in section to illustrate details of construction;

Figure 5 is a perspective view of the cam means forming part of the present invention; and

Figure 6 is an enlarged sectional view of the rope-retaining means, utilized on the simulated posts in conjunction with the present invention.

Referring now in detail to the illustrated preferred embodiment of the present invention, like reference characters are used throughout to indicate similar elements.

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This invention has been conceived and developed to provide an improved device conducive of enjoyment to young and old, particularly those interested in boxing. It has been one of the prime purposes of the present invention to develop a device which is extremely simple in the details of construction, yet is smoothly operative and durable. Any materials of construction may be employed, such as plastic, metal, wood, and any combination thereof, as well as many other known types of materials.

A housing 10 is provided of preferably substantially rectangular or square in plan configuration and a plurality of posts 12 are rigidly secured thereto. Welding, soldering, or other conventional equivalent means are employed for fixing the posts 12 to the housing 10. Detents 14 are stamped in the posts, thereby forming hooks for holding the rope 16. The ropes 16 simulate the same which are conventionally utilized in boxing rings.

The upper portion of the housing 10 is a partition 18 which serves the purpose of not only a cover for the housing 10 but also a floor simulating the usual floor of a boxing ring. An aperture 20 is formed in said floor 18 and a plate 22 is disposed thereover. This plate has a shaft 24 rigidly secured thereto, extending into the housing 10.

It will be noted from an inspection of Figure 2 that the said floor 18 is disposed on inturned flanges 26 which are a continuation of the side walls of the said housing 10. It is also noted that a detachable base portion 30 is set in the bottom of the housing 10 and it also has downwardly extending flanges to frictionally bind the same within the housing. If desired, friction means may be employed for retaining this base portion 30 within the housing 10. However, it is within the purview of the present invention to utilize any conventional means such as screwing, riveting, soldering, or the like.

A pair of figurines 32 and 34, respectively, is secured to the plate 22 and these figurines are provided with arms 36 which are pivotally secured to the body member thereof. Viewing Figure 4, it is seen that the arm 36 has a pivot pin 38 extending through the body member 40 and through the arm itself. Positioned within the figurine and adjacent the lower portion of the anatomy thereof, there is a lever 42 having a pivot pin 44 extending through the center thereof. A pitman 46 extends from one end of the lever 42 and to the arm 36 adjacent the pivot pin 38. A second pitman 48 extends from the opposite end of the

lever 42, through a suitable slot 50 within the body member 40, then to the other arm of the figurine.

A support 52 is secured to the base member 30 by any suitable conventional means, such as the screw and nut construction 54 disclosed in Figure 3. It is noted that a pair of apertures 56 is provided in the base member 30 in order to facilitate assembly. An aperture is provided in the said support 52 and the shaft 24 is passed therethrough. Also, the shaft is journaled by a suitable bearing 58 on the base member 30. If desired, the center of the shaft 24 may be bored, threaded, and a screw inserted therein to form a trunnion. Means for reciprocating the arms 36 of the figurine is provided. This means includes a cam plate 60 having an aperture 62 in the center thereof, and which is rigidly secured to the support 52. The aperture 62 encircles the shaft 24. A rocker arm 64 is pivoted to the shaft 24 by means of a conventional, suitable pivot pin 66. Pitman rods 68 are secured to opposite ends of the rocker arm 64, and, if desired, cam followers 70 may be supplied adjacent the terminal portions of pitman rods 68. These cam followers 70 engage the cam plate 60. As is seen from an inspection of Figure 4, the pitman rods 68 extend through suitable slots 72 which are provided in the plate 22. It is also apparent that these pitman rods are utilized in transmitting vertical, rectilinear motion from the cam plate 60 to be utilized in reciprocating the arms of the figurine.

Positioned beneath the said support 52 is a gear 74. This gear 74 has a collar 76 extending therefrom around the shaft 24 and a pin 78 extends therethrough for the purpose of holding the collar and shaft relatively immovable.

A bracket or support 80 is detachably secured to the base 30 and aligned apertures 82 are provided therein. These apertures have inwardly extending flanges about the periphery thereof for the purpose of serving as bearings for the hollow shaft or drive shaft 84 therein. A suitable gear 86 is supplied at one end of the shaft 84 and is in operative engagement with the teeth of the gear 74. The apertured end of the shaft 84 terminates exteriorly of the receptacle or housing 10 and a suitable operator or handle means 88 may be secured thereto. In assembly, the shaft 84 may be positioned in a suitable slot (not shown) in a selected side of the housing 10. Another mechanical expedient would be simply to arrange the handle means 88 as a detachable element relative to the shaft 84.

From the structure described above, the operation of the invention is deemed quite apparent. It will be seen that upon rotation of the handle means 88, the shaft 82 turns, thereby actuating the shaft 24 through the medium of the enmeshed gears 74 and 86. This motion is transmitted to the figurines which are positioned in the ring. Also, since the cam plate 60 is immovable relative to rotative motion, the cam follower and rocker-arm-pitman construction will, of necessity, reciprocate the arms of the figurines in menacing gestures. It is quite apparent that the reciprocation of the arms of the figurines is synchronized with the rotative movement thereof.

While there has been described and illustrated but a single, preferred embodiment of the present invention, capable of performing all of the specifically mentioned objects as well as other objects, it is apparent to those skilled in the art

that various changes including omissions, additions and re-arrangement of elements may be made herein without departing from the spirit of the invention. Accordingly, limitation is sought only in accordance with the scope of the following claims.

Having described the invention, what is claimed as new is:

1. An amusement device comprising a simulated boxing ring having a floor, a plate, means for journaling said plate adjacent said floor, means for rotating said plate, figurines secured to said plate, simulated arms pivotally secured to said figurines, means for reciprocating said arms synchronously with the rotation of said plate, said journal means including a bracket, a shaft extending from said plate, means associated with said bracket for journaling said shaft therein, said arm reciprocating means comprising a cam secured to said bracket, a rocker arm pivoted to said shaft, cam follower rollers secured to said rocker arm and engaging said cam, levers pivotally mounted in said figurines, means secured to said rocker arm for actuating said levers, means associated with said levers for reciprocating said simulated arms, said plate rotating means including a drive shaft, means for supporting said drive shaft, and transmission means associated with said drive shaft and said first-mentioned shaft.

2. Means for simulating a boxing bout comprising a simulated boxing ring, a housing associated with said ring, a partition on said housing simulating a floor for said ring, figurines having pivotally mounted arms, a plate journaled in said ring and having said figurines mounted thereon, means for reciprocating said arms in predetermined timed relation relative to the rotation of said plate, a first shaft operatively connected with said plate and journaled in said housing, said first shaft having a gear at a terminal portion thereof, an operator secured to the opposite terminal portion of said first shaft, a second shaft rotatably mounted in said housing, a gear secured to said second shaft enmeshed with the first mentioned gear, said arm reciprocating means including a cam mounted in said housing, cam followers, and means pivotally secured to said second shaft for pivotally mounting said cam followers and positioning the same on said cam for transmitting reciprocatory movement of said cam followers to said arms.

3. An amusement device for simulating a boxing bout comprising a simulated ring having a floor, a housing beneath said floor which includes sides and a bottom, a support disposed on said bottom and within said housing, a vertical shaft mounted for rotation in said support, a gear fixed to said shaft, a transverse shaft having a gear at one end enmeshed with said first mentioned gear, means mounting said transverse shaft for rotation within said housing, said transverse shaft extending through one wall of said housing and having a manually operable handle fixed thereto exterior of said housing, a plate disposed above said ring floor and fixed to one end of said first mentioned shaft for rotation therewith, figurines having legs fixedly mounted on said plate and having pivoted arms, means for reciprocating said arms while the figurines are being rotated with said plate including a cam having rises and depressions on the upper surface thereof and mounted on said shaft support, a rocker pivoted to said shaft, a pitman rod attached to each end of said rocker and hav-

ing a cam follower mounted thereon engaging the upper surface of said cam, a lever pivoted within each figurine, each having one end connected with one of said pitman rods, and links pivoted to said levers and said figurine arms.

4. In an amusement device, a simulated boxing ring including a housing having sides, a bottom and a top forming a ring floor, a plurality of posts fixed to said housing and having spaced hooks fixed thereto, simulated ropes carried by said hooks forming a contest area, a horizontal plate mounted for complete rotation in said contest area, figurines including a hollow body, legs fixed to said plate and pivoted arms, a support mounted in said housing, a vertical shaft mounted for complete rotation in said support, a gear fixed to said shaft, a transverse shaft having a gear at one end enmeshed with said first mentioned gear, means mounting said transverse shaft for rotation, a handle at the opposite end of said transverse shaft exterior of said housing, a cam fixed to said support having a horizontally disposed face, a rocker pivoted to said vertical shaft; pitman rods extending into said bodies and attached to the ends of said rocker and having rollers disposed at the ends thereof engaging the horizontally disposed face of said cam, said plate being fixed to said vertical shaft, levers pivoted within said bodies and connected to said pitman rods, and links attached to said levers extending through said bodies and attached to said arms to reciprocate said arms while said plate is being rotated.

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