July 7, 1931. F. R. CHESTER 1,812,930

GAME

Filed May 7, 1927 2 Sheets-Sheet 1

Fig. 1.

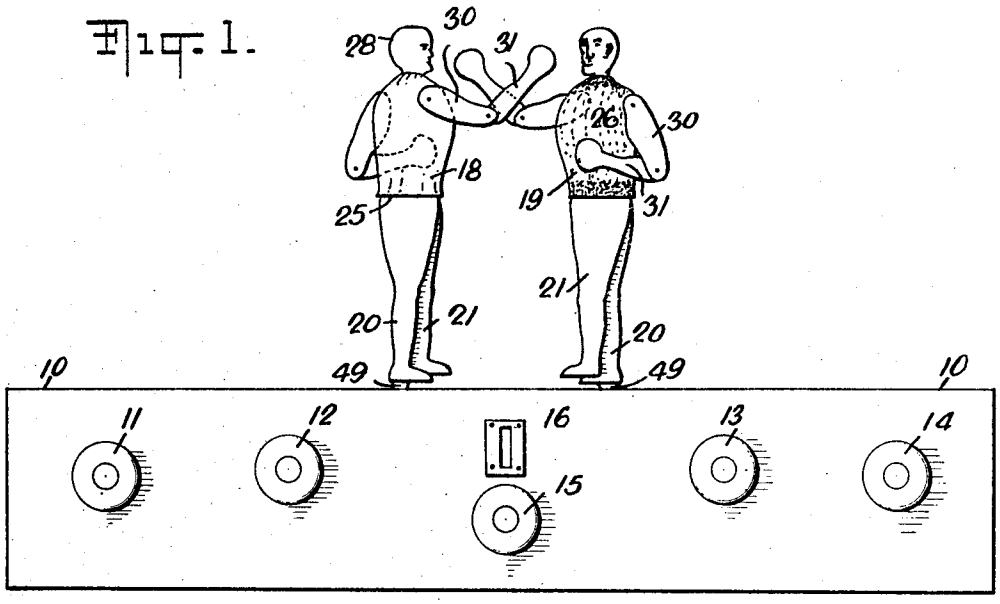
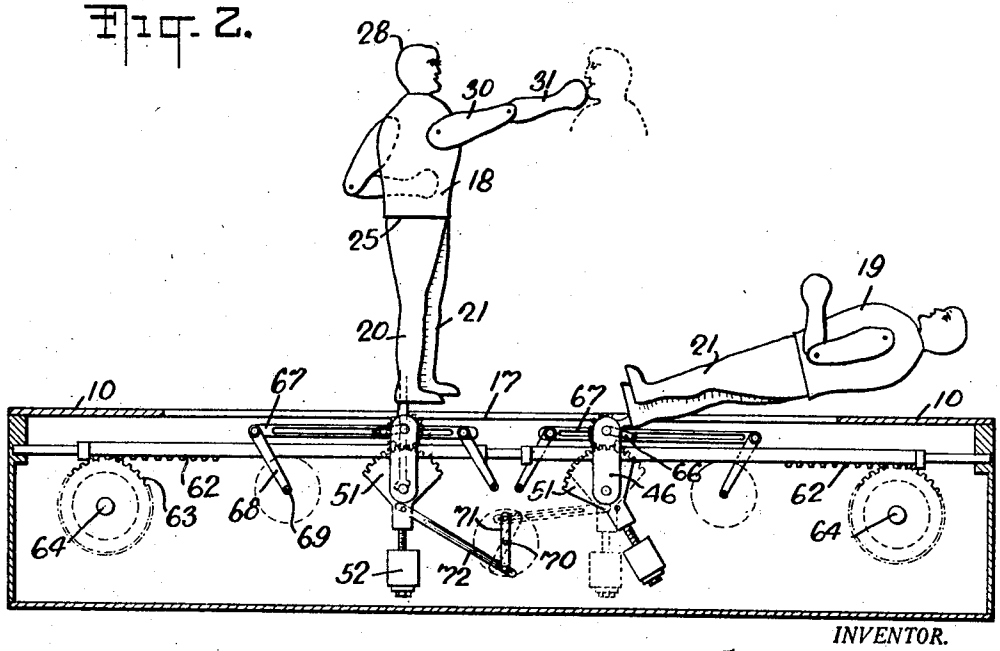


Fig. 2.



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GAME

Filed May 7, 1927 2 Sheets-Sheet 2

Fig. 3.

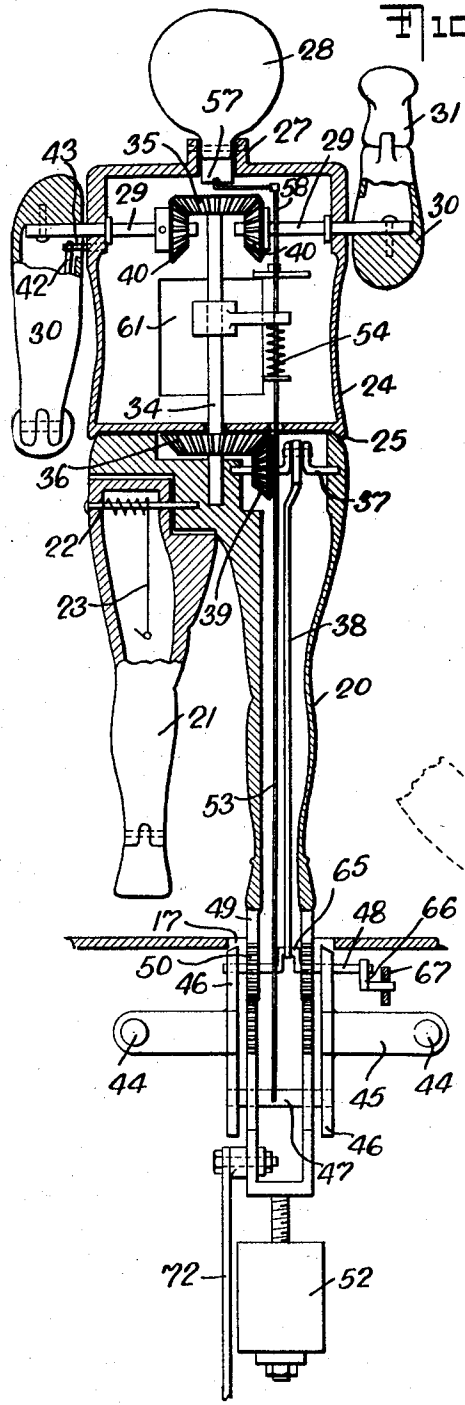

Fig. 4

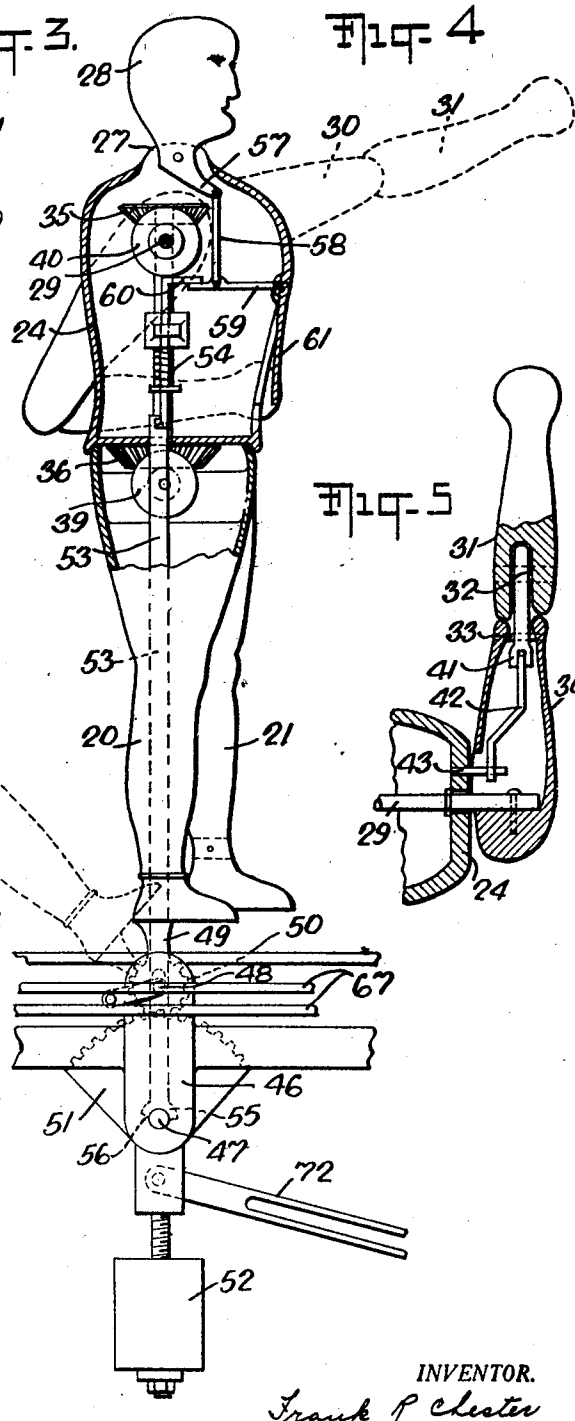

Fig. 5

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Patented July 7, 1931

1,812,930

UNITED STATES PATENT OFFICE

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GAME

Application filed May 7, 1927. Serial No. 189,511.

This invention relates to an improved game.

It is an object of the invention to provide a game of skill preferably to be operated by two players in competition with each other, which game will include relatively few and ruggedly constructed parts capable of being assembled to provide a mechanism operating over long periods of time with freedom from mechanical difficulty, aside from the fact that the game may be manufactured at a relatively nominal figure.

A further object of the invention is that of providing a game in which operators will control the movements of two figures preferably simulating in appearance boxers, and which game will be of such improved construction and operation that this control may be exercised to enable the operators to match their skill, duplicating almost every major blow and defense guard capable of being resorted to by a professional boxer.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

With these and further objects in mind, the invention accordingly comprises the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

Figure 1 is a side elevation showing one form of game embodying the improved construction of the present invention;

Fig. 2 is a similar view, showing in section the base of the game;

Fig. 3 is a transverse sectional view of one of the figures forming a part of the game;

Fig. 4 is a partly sectional side view of this figure; and

Fig. 5 is a fragmentary sectional plan view of the arm connection which may be utilized.

In these views the numeral 10 indicates a base, which is preferably hollow and which may form a part of an enclosing cabinet (not shown). Extending from the forward face of this base, in the present instance, is a series of control handles or knobs 11 to 14, and a further knob or control member 15 arranged adjacent a coin slot 16, the depositing into which of a token may permit of the initiation of game operation.

In the present instance, the upper surface of the base 10 is formed with a longitudinally-extending slot 17, along which figures, indicated generally at 18 and 19, are movable bodily by means of the knobs 11 and 14, respectively, articulated members of the figures being moved by means of the controls 12 and 13, all as will hereinafter more particularly appear.

With reference to the construction of the figures—attention being invited particularly to Figs. 3, 4 and 5—it will be noted that each of these figures, in the present exemplification, includes a nether and body portion, as well as arms and head. The nether portion may embrace limbs 20 and 21, the latter being pivoted to the former as at 22, and being urged by a spring 23 to assume a normally forwardly-extending position, as has been shown in Fig. 4. Mounted for rotation upon the nether portion of the figure is the body portion including a torso 24, the lower edge of which may be extended downwardly as at 25 to overlap the upper edge of the nether portion, and which torso may be covered by a sweater or garment, as has been indicated at 26 in Fig. 1. Pivotally secured to the neck 27 of the torso is a head 28; and fixed upon stub shafts 29 rotatably supported by the torso are arms, in each instance including an upper arm portion 30 and a forearm portion 31, the two being pivotally connected together by a rod 32 rigid with the forearm section and pivoted as at 33 to the upper arm portion.

Secured to the nether portion of the figure is a shaft 34, which extends through an opening in the torso 24 and into the interior of the same, mounting at its upper end a bevel gear 35. A similar gear 36 is secured to the lower face of the torso 24 and loosely encircles the shaft 34. The limb 20 is provided with an enlargement of its cavity adjacent

its upper end, at which point a transversely-extending crank shaft 37 is mounted; a link 38 having its upper end secured to the crank of this shaft, and the latter mounting a bevel gear 39, the teeth of which mesh with the teeth of the gear 36. Furthermore, it will be observed that the inner ends of the stub shafts 29 each mount a bevel gear 40, the teeth of which mesh with the teeth of the gear 35 so that if the torso is rotated around the fixed shaft 34 the shafts 29 will be turned.

As a consequence of this structure, if the link 38 is pulled or pushed the shaft 37 will be correspondingly moved, and, accordingly, the gear 36 being secured to the torso 24, the latter will be shifted around the shaft 34, and incident to such shifting the shafts 29 will be turned.

As shown, particularly in Fig. 5, the upper arm portion 30 is hollow and the inner end of the rod 32 terminates in a fork 41, to which the outer end of a link 42 is pivotally secured; it being noted that this point of connection is short of the point of pivotal mounting 33 of of forearm section. The upper end of the link is rockingly connected to the torso by means of a pin 43 eccentrically disposed with respect to the shaft 29. The upper arm portion being secured to this shaft, and the latter turning, the upper arm portion will be rocked with respect to the torso, and, consequently, as the upper arm portion approaches a horizontal position the forearm section 31 will gradually shift from the position at which it extends at less than rightangles to the upper arm portion to a position at which it is in substantial alignment with the upper arm portion (both portions having been indicated in dotted lines in Fig. 4).

In the present instance, each of the figures is mounted for movement along the track provided by the slot 17 by arranging rods 44 one to each side of this slot and below the deck of the base. Slidably mounted between these rods is a pair of carriages, generally indicated at 45, each of which embraces two centrally located and spaced plates 46 having a connecting bar 47 extending between them. In order to support each of the figures upon a carriage to move with the same and to be mounted to have swinging movement with respect thereto a shaft 48 extends between the plates 46, and the limb portion 20 is extended in the form of a pair of spaced pedestal plates 49 through which the shaft 48 extends, these plates being continued in the form of an interrupted pinion 50, the teeth of which mesh one with each of spaced arcuate racks 51 arranged in line with the plates 49 and pinions 50 forming continuations thereof; the teeth of these elements meshing and the racks 51 being connected at their lower ends and mounted at a point above the same by means of the rod 47. Extending below the point of connection of the racks is a counterweight 52, and it is here to be noted that the parts are so proportioned that, while the figure, incident to its mounting and the provision of the counterweight, serves normally to be maintained in vertical position, it may be shifted—as has been indicated in dotted lines in Fig. 4—to rock with respect to the shaft 48, this rocking resulting in a movement of the counterweight 52, which will travel at a comparatively slow rate of speed as regards the figure movement by virtue of the reduction between the pinions and racks. Consequently, the figure, when once moved out of vertical position, will move at a comparatively slow rate to a point at which it extends substantially horizontally, as has been shown in full lines in Fig. 2.

Normally, the figure is prevented from rocking with respect to the carriage by means of a rod 53 which extends within the hollow limb 20 through a slot in the lower face of the torso 24 and into the hollow interior of the latter. This rod is spring-pressed as at 54 to be normally projected downwardly, and its lower end is forked at 55 to embrace the rod 47; it being here observed that one of the arms of the fork has its outer end beveled as at 56 to provide a latch portion. Thus, the figure will normally move with the carriage, but may be caused to swing with respect to the same if the rod 53 is shifted upwardly against the tension of the spring 54 and the figure is rocked. In order to effect such shifting the head 28 has an extension 57 beyond its point of pivotal mounting; this extension being link-connected as at 58 to one arm of a crank 59 which underlies the forwardly-projecting end 60 of the rod 53. The second arm of this crank provides a breast-plate 61. As a consequence, if the head 28 is moved rearwardly the rod 53 will be shifted upwardly, and the same movement will follow if the breast-plate 61 is pushed inwardly. In either of these instances, in addition to withdrawing the forked end 55 from the rod 47, the figure is forced rearwardly so as to initiate a toppling of the figure at the time of withdrawal of the rod from its locking position, which toppling will continue incident to the action of gravity.

In order to shift each of the figures along the slot 17, it is preferred that each carriage 45 provide a rack portion 62, which meshes with the teeth 63 of gears secured to the shafts 64 mounting the knobs or controls 11—14. Accordingly, it will be obvious that by rocking the latter the carriages and figures supported thereby will be projected or retracted along the track.

In order that the figure parts may be actuated irrespective of the position of the latter, the link 38, in each instance, has its lower end connected to crank portion 65 forming a part of the shaft 48. The outer ends of the latter terminate in a crank 66; and arranged

to extend parallel to the path of travel of this portion is a slotted bar 67, within the slot of which the crank-end rides. One bar is provided for each figure, and each of these bars is supported by a pair of links 68, one of which is mounted by the cabinet for rocking movement, the other being attached to the shaft 69 to which the actuating knob is secured. Thus, irrespective of the position to which the carriage has been shifted, a turning of the shaft 69 in either direction will result in a movement of the bar 67, causing a corresponding movement of the crank 66 and shaft 48 to either pull or push the link 38 to effectuate the movements of the articulated portions of the figures, as aforedescribed.

When a figure is knocked down, as shown in full lines in Fig. 2, it becomes necessary to reestablish the position thereof before a continued actuation of the game may occur. In order to accomplish this result the control or knob 15 is secured to a shaft 70 which mounts a lever 71 having pins at its outer end riding one within each of slotted rods 72, the outer ends of which are connected, as in Figs. 2, 3 and 4, to the arcuate rack members 51 at points below the rod 47. While this mechanism will in no wise interfere with the retraction and projection of the figures along the track defined by the slot, it is obvious that if either or both of these figures are in reclining position an operator, simply by turning the knob 15, will cause a pull to be exerted upon the rack and counterweight construction of that figure which is recumbent. This pull, by means of the racks and pinions, will cause an upward swinging of the figure to a position at which it extends substantially vertically with respect to its carriage, and further movement thereof will be prevented incident to the latch-portion 56 of the fork 55 striking against the rod 47 and overlapping the same to again assume the position shown in full lines in these several figures.

From the foregoing the operation of the game will be clear. Briefly reviewing the same, however, it is obvious that with the parts shown in the position in Fig. 2, and preferably upon the insertion of a coin (if a token-control mechanism be employed) the knob 15 is released for movement to establish the position of one or both figures. Thereupon, with one operator grasping the controls 11, 12, and the other operator grasping the controls 13, 14, it will be appreciated that the figures may be shifted toward and away from each other and simultaneously or independently of such movement cause to swing the torso with respect to the nether portions of their bodies, thus effectuating a swinging of the arms. If the position of one figure with respect to the other is properly determined, and the blow is accurately timed, a skillful operator may cause the fists of the forearm portions to strike against either the head—and particularly, the chin thereof—or the breast-plate (approximating the location of the solar plexus). In either event, if the blow is delivered with sufficient force to score a "knock-out" the rod 53 will be retracted and the figure will be caused to topple whereupon the player controlling the movements of the remaining figure will be declared the winner. A repetition of the operation may be secured by again actuating the control 15.

Thus, among others, the objects of this invention have been accomplished, and since certain changes may be made in the above construction, and different embodiments of the invention could be made, without departing from the scope thereof, 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.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A game, including a base, figures mounted upon said base, means for shifting said figures toward and away from each other, movable portions forming a part of said figures, means for moving such portions including a crank, a parallel link movement mounted by said base, one of the links thereof being formed with a slot accommodating the end of said crank, said slot extending in the direction of shifting of said figure, and means for rocking said parallel link movement to actuate the movable portions of said figure.

2. A game, including a figure comprising relatively rotatable nether and body portions, a shaft secured to said former portion and extending into the latter portion, a gear connected with the latter portion, means cooperating with said gear to shift the body portion with respect to the nether portion, a further gear mounted by said shaft, arms, shafts connected with said arms and extending into said body portion, and gears secured to said latter shafts and engaging said last-named gear.

3. A device of the character described comprising a figure including relatively movable body and nether portions, arms movably connected to said body portion and providing striking and guarding elements, means for axially rotating the body portion of said figure with respect to the nether portion thereof and means connected to said last-named means and arms for projecting the

latter throughout their full range of positions in response to the movements of the body portion with respect to the nether portion of the figure.

4. A device of the character described including a figure comprising relatively rotatable body and nether portions connected to each other adjacent the waist of the figure, limb portions movably connected to said figure, means for moving the said limb portions with respect to said figure and means for rotating the body portion of the figure with respect to the nether portion thereof.

5. A device of the character described including a figure comprising relatively rotatable body and nether portions connected to each other adjacent the waist of the figure, arm portions movably connected to the body of said figure, means for rotating the body with respect to the nether portion and means for projecting said arms.

6. A device of the character described including a figure comprising nether and body portions relatively rotatable with respect to each other, arms connected to said body portion, a shaft secured to said nether portion and extending into said body portion, means for rotating said body portion with respect to said nether portion, shafts mounting said arms and also extending into said body portion, gears secured to said latter shafts, and a gear meshing with said last-named gears and secured to said first-named shaft whereby, upon said body portion being rotated with respect to said nether portion, said arm-shafts will be rotated to project and retract said arms.

7. A game including a support, a track associated with said support, a figure mounted for movement upon said track, means for projecting and retracting said figure along said track, movable limb portions forming a part of said figure and means extending parallel and adjacent to the track and connected to said limb portions to operate the same irrespective of the position of said figure along said track.

8. A device of the character described including a support, a track forming a part of said support, a figure, a carriage mounted upon said track, means for rockingly coupling said figure for movement with respect to said carriage, means for normally locking said figure against such movement, means for releasing said last-named means, means for cushioning the rocking movements of said figure and means for re-establishing said figure in proper position with respect to said carriage and rendering said locking means operative.

9. A device of the character described including, in combination, a supporting structure, a track associated with said structure, a carriage mounted for movement upon said track, a figure disposed above said supporting structure, means for rockingly mounting said figure upon said carriage, means for normally locking said figure against movement with respect to said carriage, means for releasing said last named means whereby to permit said figure to assume a position inclined with respect to said carriage, and means within said supporting structure for reestablishing said figure in proper relative position with respect to said carriage and again rendering said locking means operative.

In testimony whereof I affix my signature.

FRANK R. CHESTER.