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M. T. LANE

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TOY FIGHTER

Filed May 22, 1930

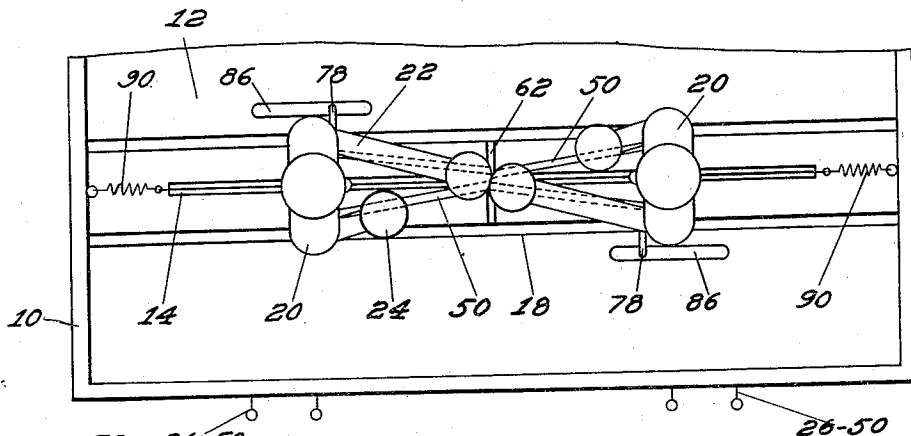


FIG. 1

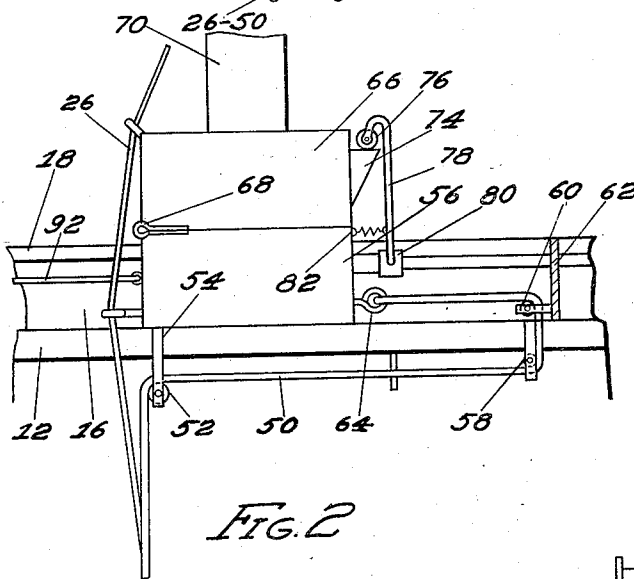


FIG. 2

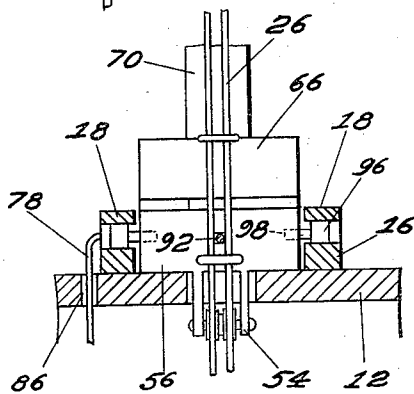
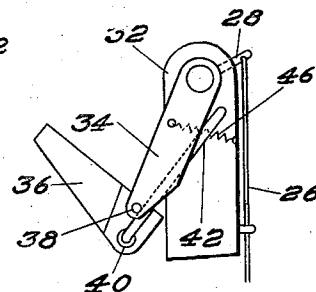


FIG. 3

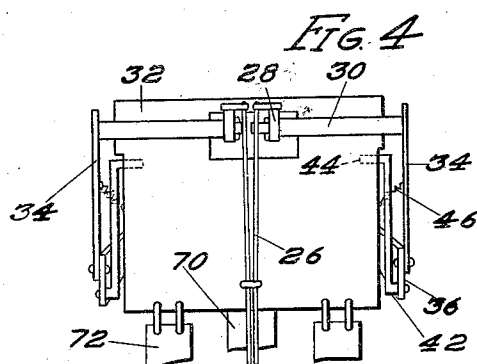


FIG. 4

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TOY FIGHTER

Application filed May 22, 1930. Serial No. 454,707.

This invention relates to improvements in toy fighters, and has for one of its principal objects the provision of a pair of animated dolls or the like which simulate prize fighters, and which are adapted to be actuated manually by two operators, each operator controlling a doll, the object being to knock down the opponent's doll.

One of the important objects of this invention is the provision in a pair of toy fighters of a body for each fighter simulating a human body having jointed arms, each of the arms adapted to be thrust forwardly at the will of the operator and in accordance with a corresponding arm movement of the operator, and which arm movement and construction is such as to very closely resemble an actual arm movement of a prize fighter striking a blow.

Another and further important object of this invention is the provision in a pair of prize fighting dummies or the like of means for retaining the same upright through the operation of an automatically controlled latch which at a certain stage in the movement of the fighter is released, thereby allowing the fighter to be knocked down if struck while in such a release position, the release means being automatically re-latched upon the return of the dummy to its original zone of movement.

Other and further important objects of the invention will be apparent from the disclosures in the accompanying drawings and following specification.

The invention, in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings:

Figure 1 is a top plan view of a pair of toy fighters constructed in accordance with the principles of this invention.

Figure 2 is a side elevation of the base of one of the fighters together with the operating hand release means.

Figure 3 is a rear view of the base of one of the fighters.

Figure 4 is a detail view of one of the arms showing the mechanical construction.

Figure 5 is a rear view of the upper end

of one of the fighters, showing the interior body construction.

As shown in the drawings:

The reference numeral 10 indicates generally a casing or the like in which the toy fighters of this invention are mounted for operating purposes, the mounting comprising essentially a floor element 12 having a central longitudinal slot 14 therein, this slot being positioned midway of a pair of releases or the like 16. Each of the releases has mounted immediately above it a co-operating rail 18 as best shown in Figures 1 and 3. The lower rails 16 are fixed on the base 12, and the upper rails 18 are removably mounted in the ends of the casing 10.

The fighters themselves are represented at 20 in Figure 1, each body having a pair of arms 22 pivotally mounted at its side to simulate a shoulder and jointed at the elbow portions. It will be noted that the arms are attached at an angle so that the fists which are covered to simulate boxing gloves or the like 24 will be directed forwardly and in toward the center when moved into blow delivering position by the operator.

The means for moving each arm comprises essentially a cord, wire, or string 26, the upper end of which is attached to a rearwardly extending rod 28 which in turn is mounted on the inner end of a shaft 30 rotatably positioned in a suitable opening in the body 32 of the dummy.

At the outer end of this shaft 30 is fastened a link member 34 which simulates the upper bone of the dummy's arm. The forearm is represented by means of an extending element 36 pivotally mounted at 38 to the lower end of the upper arm piece, and mounted in an opening 40 in the lower end of the arm member 36 is a link element 42, the upper end of which is pivotally positioned in an opening 44 formed in the body just below and slightly behind the pivotal joint of the forearm mounting. This is best illustrated in Figures 4 and 5. A helical spring 46 is attached to the bottom member and to the middle portion of the upper arm element 34 so as to automatically retract the same into a normal position after operation.

The pivotal mounting of each arm piece together with the action of the link element 42 is such as to very closely simulate the actual human arm movement of a boxer striking a blow from the shoulder or upwardly. Each of the arms is so operated, an individual operating cord 26 being provided in every instance, these operating cords passing downwardly behind the body member and behind the standard which supports the body and through the slot 14 in the floor member 12, and each of these cords 26 is then connected to a corresponding one of another pair of cords 50 best shown in Figures 1 and 2, these cords passing upwardly from their point of juncture with the cord 26, and each passing over a pulley wheel 52 mounted in the bracket 54 fastened to the lower base of the supporting block 56 of the dummy, and thence passing forwardly beneath the floor member 12, to another pulley 58 and finally upwardly through the slot 14 and over another pulley 60 which is mounted in a bracket attached to a central cross-piece 62 and finally rearwardly again terminating in a hook or the like 64 mounted in the forward portion of the block 56.

Obviously, a pull on either one of the joined cords 26—50 will simultaneously operate the corresponding right or left arm of the dummy and move the dummy forwardly into a position to strike a blow upon the body or arm of the other dummy.

Means are provided so that when the dummy is moved forwardly beyond a certain point it is liable to be knocked down if struck, this means comprising essentially a block 66 hingedly mounted at 68 to the block 56. This block 66 supports the standard 70 upon which in turn is mounted the body portion 32 of the dummy, the same being provided with leg elements 72 which are hingedly mounted at the bottom edge of the body 32 and which will swing forwardly and rearwardly according to the motion of the body, thereby simulating the boxer's leg action.

At the forward end of the block 66 is mounted a projection or the like 74 which has normally in contact therewith a roller or the like 76 which is mounted in a suitable bifurcated support in the upper end of a latching lever 78, this latching lever being pivotally mounted adjacent its middle portion in a bearing element 80 which is fastened to the forward portion of the block 56. A spring 82 operates to normally maintain the latching lever 78 in proper locking relation with the projecting lug 74 whereby any movement of the body, 32, standard 70 and block 66 about the hinge 68 is prevented.

However, the lower portion of the latching bar 78 extends sidewise through the slot formed between the members 16 and 18, and

thence downwardly as shown in Figures 1 and 3 through another slot 86 formed in the floor 12.

This slot is quite short as best shown in Figure 1, and is so positioned in the floor that when the dummy is in normal retracted position, this being accomplished by means of helical springs 90 fastened by means of cords or the like 92 to the rear of the block 56, the end of the latch bar 78 will project downwardly through the slot 86, leaving the roller 76 in locking relation with the projecting lug 74. However, as the dummy is drawn forward by means of the operation of the cord or wire 50, the lower projecting end of the latch element 78 will strike the forward edge of the slot 86 and the latch element will be accordingly tilted, thereby releasing the roller 76 from contact with the lug 74, and leaving the corresponding dummy in position to be knocked over if struck at that particular time and when in that position. Of course, as soon as the dummy is allowed to be retracted by release of the cord 50 and action of the spring 90, the arm 78 will again assume its vertical position and a knockdown will be impossible.

The casing in which the dummies are mounted is adapted to be positioned at a height of three or four feet from the floor upon which the operator stands, and the cords 26—50 extend downwardly to the floor, and are preferably connected to operating levers or the like positioned in a counter in front of which the operators stand, these operating levers being connected to the cords in such a manner that a forward motion of the lever handle imparts a corresponding forward motion to the dummy's fist. Obviously, the method of operating the dummies may be varied as required and expedient.

The blocks 56 are mounted in a fairly close sliding relation to the rails 16 and 18, and the rollers 96 are mounted on projecting pins 98, these rollers running between the rails so that the blocks and their corresponding dummies will be positively maintained in desired position at all times.

It will be evident that herein is provided a set of toy fighters or the like which will provide a source of interesting amusement for a pair of players or operators, and which will so closely simulate human action that they will be doubly amusing while at the same time providing a construction which is simple yet sturdy and not at all likely to get out of order, even under conditions of severe usage.

I am aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention, and I, therefore, do not purpose limiting the patent granted hereon otherwise than as necessitated by the prior art.

I claim as my invention:

1. In a mechanical prize fighter, a body having a head, arms and legs, and means for simulating and accomplishing arm movements to deliver and ward off blows, said
5 means comprising a system of cords and pulleys, and means for simulating and accomplishing leg movements, and at the same time effecting a forward or reverse movement of
10 the body, said means including an allied system of cords connected to the body and operated by manually controlled levers said first-named cords being connected to and shiftable with the body.

2. A pair of toy fighters, including in combination, two dummies, each dummy having a pair of jointed arms, and means for manually operating each of the arms, said means comprising a longitudinally rotatable rod
20 mounted in the body of the dummy, a lateral extension on one end of the rod, and a cord connected to the extension for rotating the rod, an upper arm element fixedly mounted on the other end of the rod, a forearm
25 element pivotally mounted at the end of the upper arm element, and a link connecting a portion of the forearm element to the body.

3. In a mechanical prize fighter, a body having a head and arms, a supporting base
30 for the body, said base comprising two blocks hinged together, and manually operated means for simulating and accomplishing arm movements to deliver and ward off blows, together with means for accomplishing body
35 movements to avoid blows, and means for normally maintaining said body in upright position, together with an automatically operated trip for releasing said positioning means.

4. In a mechanical prize fighter, a body having a head and arms, and means for simulating and accomplishing arm movements to deliver and ward off blows, together with
40 means for automatically accomplishing leg movements, and means for normally maintaining said body in upright position, together with a trip for releasing said positioning
45 means upon forward movement of the body and means associated with the body for allowing of its overturning upon the delivery of a blow, when in said forward position.
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In testimony whereof I affix my signature.

MICHAEL T. LANE.

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