

PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION.

Improvements in Coin-freed Game Apparatus.

I, JOHN JOSEPH, a British subject, of 12, Westmoreland Place, City Road, London, N. 1, do hereby declare the nature of this invention to be as follows:—

This invention relates to coin-freed apparatus consisting of two boxing or fighting figures adapted to be operated by two competitors, and has for its object to provide an efficient apparatus of this type of simple construction.

According to the present invention means are provided whereby the two figures can be operated by two competitors in such a manner as to call for some skill in such operation, the device being preferably of the kind requiring two coins for rendering it usable and wherein one of the coins is subsequently returned to the users.

The figures are pivotally supported in such a manner that either of them can be knocked over by the other when the other is manipulated in a particular manner, means being provided whereby a knocked over figure is automatically restored to the upright position.

In the preferred form of the apparatus the figures are supported opposite each other on levers extending below their feet, the pivots being arranged immediately under their feet. The arms of the figures are extended in a fighting attitude and are supported in position on pivots about which they are given a continuous oscillatory movement by means of a crank or lever the end of which is connected by a link which passes down behind or through the figure to a crank on a shaft operated continuously by an electric or other suitable motor.

The lower end of the lever extending below the feet of a figure is connected by link and lever mechanism, or by a spring catch pivoted at one end of a link slidably mounted in a rockable lever and pivoted

at its other end, to one end of rocking lever provided with an operating handle extending through the case of the apparatus within reach of an operator, so that by means of this handle the figure can be rocked about its pivot in such a manner as to deliver a blow to the opposite figure, the opposite figure being at the same time manipulated in a similar manner through duplicate mechanism by a second or competitive operator.

In order to provide means whereby the opposite figure will be knocked over only when a knock out blow is given in a particular direction, the rockable lever carrying the slide of each figure tilting mechanism is provided with means whereby it can be rocked to release a figure operating and holding catch, such mechanism being operatively connectable to the manipulating lever of the opposing figure. Each figure is preferably held in the upright position with a projection or pin on its operating lever engaging the operating catch by the weight of its operating lever or a suitably arranged spring, and the rockable lever is provided with an arm fitted with a projecting rod pointing towards the opposite figure and recessed to receive the end of an operating pointer slidably mounted in guides and pivoted at its rear end to one end of a link of which the other end is pivoted to an arm extending from the operating lever, so that by moving the operating lever in such a manner as to cause the pointer to enter the recess on the projecting rod of the catch lever of the opposite figure, such catch will be released and the blow given to figure will knock it over. The pointer is mounted between laterally arranged springs so that when it is pushed out of its normal position during the manipulation of the operating lever it will return thereto automatically when free.

[Price 1/-]

The slide carrying the reciprocating pointer is mounted at its rear end on a pivot about which it is rocked in unison with the oscillating movement of the arms of the figure by crank and link mechanism connected to the motor driven or rocked shaft imparting the oscillatory movement to the arms of the figures.

The mechanism for returning a knocked down figure to its upright position may consist of a flexible cord connected over pulleys to the end of a freely suspended crank adapted to be operated by a crank pin on a disc rotated by the motor in such a manner as to pull on the cord to restore a figure to its upright position and at the same time allow of it being knocked over periodically.

When an electric motor is used to drive the apparatus its circuit may be closed by spring-controlled sliding contacts held

out of contact by a catch releasable by the weight of a coin inserted in a coin chute, two such devices being preferably provided with the contacts in series so that the presence of two coins, one in each chute is required before the circuit can be completed. One of these chutes is provided with a discharge end for returning the coin to the operators, such coin being held by an obturator removable after a given interval by mechanism operated by the motor which also restores the catches of the sliding contacts to engaging position and so opens the circuit of the motor.

Dated this 18th day of July, 1922.

A. A. THORNTON,
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8, Quality Court, Chancery Lane,
London, W.C. 2,
For the Applicant.

COMPLETE SPECIFICATION.

Improvements in Coin-freed Game Apparatus.

I, JOHN JOSEPH, a British subject, of 12, Westmoreland Place, City Road, London, N. 1, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to game apparatus consisting of two boxing or fighting figures adapted to be operated by two competitors, and has for its object to provide an efficient apparatus of this type of simple construction, and which may be constructed as a coin-freed apparatus, the device being preferably of the kind requiring two coins for rendering it usable and wherein one of the coins is subsequently returned to the users.

Heretofore in a multiple coin slot apparatus in which is arranged a pair of pugilistic figures adapted to rock about pivots arranged below their feet and connected to spring-controlled lever mechanism operable by the competitors, it has been previously proposed to provide means whereby one coin will be delivered to a competitor by mechanism operated by hitting the head of his opponent's figure. It has also been proposed in a pair of pivoted pugilistic figures operable by two competitors, to hinge the upper portion of each figure to its lower portion so that it can fall forward against the lower portion, and to hold the hinged portion in the upright position by a catch releasable by a blow from the opposing figure.

The present invention consists broadly of a game apparatus of the kind comprising a pair of pivoted pugilistic figures adapted to oscillate towards each other in fighting attitude and to be operated manually by two competitors, characterised by the provision therein of means whereby either figure can be knocked completely over on its pivot by the skillful manipulation of the opponent figure.

The arms of the figures are preferably pivoted and moved continuously up and down about their pivots by motor mechanism, and the blow directing or controlling mechanism adapted to oscillate in unison with the arms of the figures. Any suitable mechanism may be provided for restoring a knocked over figure to its normal upright position, and this mechanism may be arranged to be operated automatically by motor mechanism at prearranged periods.

An embodiment of the invention is illustrated by the accompanying drawings wherein Fig. 1 is a front view of the main elements of the apparatus, Fig. 2 a diagrammatic view illustrating mechanism for restoring a knocked over pugilistic figure to its normal position, while Figure 3 is a perspective view and Fig. 4 a side view of suitable coin chute mechanism for the apparatus.

In the apparatus as illustrated two pugilistic figures 10 and 11 are supported in fighting attitude opposite each other on pivots 12 arranged below the feet of the figures and suitably mounted in bear-

ings in the casing. The operating mechanism of each figure is identical and the corresponding parts bear the same reference numerals. The pivot 12 of

5 each figure is arranged at the upper portion of an arm or lever 15 extending downwards from the feet of the figure and provided at its lower end with a pin 31 whereby it is connected by a releasable
10 catch 35 to the operating mechanism. Each figure is counterweighted or provided with a spring for holding it in engagement with the catch 35. The
15 operating mechanism for each figure consists of a hand lever 50 arranged in a convenient position on the outside of the casing of the apparatus and fixed on a shaft 51 mounted in bearings 53 within
20 the casing and having fixed thereon a lever 52. The upper portion of the lever 52 is connected by a pin 54 to a link 55 connected at its other end by a pin 56 to a slide 57 adapted to be reciprocated in
25 guides 58 carried on a rocking frame 40 pivoted at 41 to a standard 59 fixed in the casing of the apparatus. The releasable catch 35 is pivoted at 42 to one end of the slide 57 mounted in the rocking
30 frame 40 and is provided with a spring 37 whereby it is returned to its normal position after being moved therefrom, this position being determined by the engagement of a pin 60 engaging the under side
35 of the projecting end of the rocking frame 40. This projecting end of the rocking frame is provided with a catch 61 in shape similar to and arranged immediately behind the catch 35 so that
40 both catches can be in engagement with the pin 31 at the same time and both released therefrom when the frame 40 is tilted forward about its pivot 41. The frame 40 is returned to its normal position by a spring 140 which holds its arm
45 63 against a stop 141.

The figures 10 and 11 are so constructed or counterweighted that when in the normal position they will hold the pin 31 against the hooks of the catches 35
50 and 61, the inner portion 62 of the hook 61 being curved to enable the pin 31 to ride freely backwards during the forward oscillation of the figure by movement of the slide 57.

55 The forward oscillation or movement of each figure is effected through the catch 35, slide 57, link 55 and lever 52 by pressing the handle 50 downwards, the return movement of the figure being
60 effected by gravity or by a spring and the return movement of the slide by a spring 130.

The arm 17 of each pugilistic figure is extended in fighting attitude and supported in such position on a pivot 21

about which it is given a continuous oscillatory movement by means of a crank arm 23 of which the outer end is connected by a pin 22 to a link or cable
70 25 passing behind or through the figure to the end of a crank arm 28 extending from a shaft 29 adapted to be rocked continuously by an electric or other suitable motor.

In order to provide means whereby an
75 opposing figure will be knocked over when a knock out blow is given to it in a particular direction, the rocking or tiltable frame 40 of each figure is provided with a downwardly extending arm
80 63 in the lower end of which is fixed a plunger or pin 64 having a recessed end pointing towards and adapted to be engaged by the point of a horizontally
85 movable member or plunger 65 on controlling mechanism provided on the opposing figure.

The controlling mechanism carrying the plunger 65 is adapted to be reciprocated by the hand lever 50 being connected to the lower end of the lever 52 by means of a link 66 connected at one end
90 by a pin 67 to the rear end of the plunger 65 and at the other end by a pin 68 to the lower end of the lever 52. The plunger
95 65 slides in guides 69 mounted on a rocking member 70 pivoted at 71 to a bracket 72.

The plunger 65 is capable of a rocking motion about the pin 67 in the guides 69
100 and is held in the central position in such guides by means of a spring 73 arranged to force the pivoted levers 74 and 75 against opposite sides of the plunger 65, the levers 74 and 75 being
105 pivoted to the rocking member 70. This arrangement enables the rocking member 70 to rock even when the plunger 65 is in engagement with the plunger 64, and the member 70 is rocked continuously
110 about its pivot 71 by a link 76 of which the other end is connected to the end of a crank arm 27 extending from the motor rocked shaft 29.

During the operation of the apparatus
115 the rocking member 70 rocks in unison with the arms 17 of the figures, both being operated by the shaft 29, so that when the figure 11 is tilted by the hand lever 50 in a particular direction the
120 plunger 65 of the controlling mechanism will engage the plunger 64 on the arm 63 and so tilt the frame 40 of the opposing figure and thereby free its catches 35 and 61 so that the figure 10 will be completely
125 knocked over on its pivot. As the whole of this mechanism is duplicated for each figure each competitor has an equal chance of dealing a knock over
130 blow to his opponent's figure.

The knocked over figures are returned to their normal positions automatically after a given time from the commencement of the fight by timed motor mechanism, and this may be effected from a motor operated shaft 77, see Figure 2, on which is fixed a crank disc 78 carrying a crank pin 79. Within the path of the crank pin 79 is arranged a link 80 mounted at one end freely on the shaft 77 and connected at the other to the end of a cable 81, the other end of the cable being secured to the lower end of the arm or lever 15 projecting from the feet of the figure 11. By passing the cable over suitably arranged pulleys 82, 83, the cable operating mechanism of both figures can be arranged to be operated from the shaft 77. In this device for restoring a knocked over figure to upright or normal position, when a figure is knocked over it pulls the link 80 idly about the shaft 77 to a position in which after a given time it will be engaged by the crank pin 79 and so pull the lever 15 to raise the figure to its normal upright position.

An example of coin-freed mechanism applicable for use with this apparatus is illustrated in Figures 3 and 4, wherein two contact switches 100 and 101 are arranged in the circuit supplying power to the operating motor, each adapted to be closed by a separate coin and both required to be closed before the circuit is completed to the motor.

Each switch consists of a pair of contacts adapted to be bridged by a sliding rod 102 which when free is moved into circuit closing position by means of a spring 103. The rod 102 is slightly mounted in guides 104 and 105 in such a position that its coin engaging end passes through slots 106 arranged transversely in the coin chutes 107 and 108, and is held there by a catch 109 adapted to engage the upper edge of a hole in the guide 104 in such a manner as to hold the rod normally away from the contacts. When the rod 102 is depressed by the weight of a coin inserted in the coin chute 107, its catch 109 is lowered sufficiently to enable the spring 103 to pull the rod through the guides 104 and 105 until its end engages and bridges the contacts of the switch 100. Each of the rods 102 has on it a pin 110 which engages the end of a lever 111 secured on a shaft 112 mounted in bearings in the casing and rocked at the end of a given period by any suitable timed motor mechanism to return the rod 102 to its normal position the rod returning spring 103 being also arranged to lift the catch 109 into engagement with the guide 104.

The apparatus may be provided with means for returning one of the coins to the competitors after a given time limit arranged for each operation of the apparatus. Such means as shown in Figs. 3 and 4 consists of a coin-retaining rod 113 secured to the lever 111 and having a bent over returned end adapted to pass through openings 114 in the chute 107. In operation the end of the coin-retaining rod 113 is pulled through the opening 114 by the lever 102 when the latter is moved inwards by a coin, so that when the coin passes over the end of the rod 102 it will be retained in the chute 107 by the rod 113, and be held there until, after a given time, the lever 111 is operated by the motor mechanism to return the rod 102 to its normal position. This return movement withdraws the rod 113 from the chute and allows the returnable coin to pass through the lower end of the chute 107 to the competitors.

The shafts 29, 77 and 112 are mounted in bearings fixed in the casing and are preferably driven from mechanism operated by the same motor, the timing of the mechanism driven by the motor to operate the shafts 77 and 112 being such that the shaft 77 will be rotated sufficiently to pull a knocked-over figure to upright position before the shaft 112 operates to open the switch of the motor.

In order to provide more yieldable pugilistic figures, the downwardly extending arm or lever 15 is divided into two portions 15 and 120 connected together by a spring 121. The portion 120 is integral with the figure 11 and pivoted at 12, while the portion 15 carries at its lower end the operating pin 31 and is pivoted freely at its upper end on the pivot 12. The spring 121 is connected at one end to the arm 120 and at its other end to a rigid extension 122 formed on the arm 15, a stop 123 being provided on the arm 15 to limit the movement in one direction of the arm 120. By this mechanism a figure can yield a little to the blow from its opponent figure without being actually knocked over and will only be knocked over when the controlling mechanism of the opponent figure is manipulated in the particular manner described above.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A game apparatus of the kind comprising a pair of pivoted mechanical pugilistic figures adapted to oscillate towards each other in fighting attitude,

and to be operated manually by two competitors, characterised by the provision therein of means whereby either figure can be knocked completely over on its pivot by the skilful manipulation of the opponents figure.

2. A game apparatus in accordance with Claim 1, wherein each figure is oscillated on a pivot suitably mounted in a casing and arranged under its feet at the upper end of an arm extending below the figure, the lower end of the arm being detachably connected to operating and controlling mechanism.

3. A game apparatus in accordance with Claim 1, wherein each figure is provided with a releasable catch normally preventing the figure from being knocked over by the opposing figure until released by the controlling mechanism of the other figure, each figure being counter-weighted or provided with a spring for holding it in engagement with its releasable catch.

4. A game apparatus in accordance with Claim 2, wherein the downwardly extending oscillating arm of each figure is divided into two portions movable relatively to one another on a pivot and yieldingly held together by a spring.

5. A game apparatus in accordance with Claim 1, wherein the arms of the figures are pivoted and moved continuously up and down about their pivots by motor mechanism.

6. A game apparatus in accordance with Claim 5, provided with blow directing or controlling mechanism adapted to oscillate in unison with the arms of the figures.

7. A game apparatus in accordance with Claim 3, wherein the releasable catch of each figure is a spring-controlled one mounted on the end of a spring-controlled rockable frame having an arm extending therefrom into the path of a reciprocating member adapted to be reciprocated by the manually operated mechanism of the opposing figure and when moved into engagement with the arm of the frame to tilt the frame about its pivot and release the catch.

8. A game apparatus in accordance

with Claim 7, wherein each reciprocating member carries a pivoted plunger adapted when reciprocated in a given direction to engage a recess on the end of a plunger fixed on the extending arm of the catch releasing rocking frame of the opposing figure substantially as described.

9. A game apparatus in accordance with Claim 8, wherein the reciprocating pointed plunger is mounted between spring controlled levers allowing it to yield laterally and also when released to return to its normal position.

10. A game apparatus in accordance with Claim 1, wherein motor driven mechanism is provided for returning a knocked over figure to its normal upright position and such mechanism is operated periodically by the motor.

11. A game apparatus in accordance with Claim 10, wherein the knocked over figure is restored to normal position by means of a flexible cable passing over a pulley to the end of a crank arm loosely mounted on a motor driven shaft carrying a crank pin adapted to engage the side of the loosely mounted crank arm in such a manner as to effect the tilting of the figure in restoring direction periodically and in the meantime leave the cable free so as not to interfere with the manipulation of the figures by the competitors.

12. A game apparatus in accordance with Claim 5, wherein the motor is an electric one and the circuit thereof provided with two sets of switch contacts both of which have to be closed to supply current to the motor and each provided with closing mechanism operated by coins inserted in separate coin chutes.

13. A coin freed game apparatus having its parts constructed, arranged and adapted to operate substantially as described with reference to the accompanying drawings.

Dated this 18th day of April, 1923.

A. A. THORNTON,
Chartered Patent Agent,
Quality Court, Chancery Lane,
London, W.C. 2,
For the Applicant.

[This Drawing is a reproduction of the Original on a reduced scale]

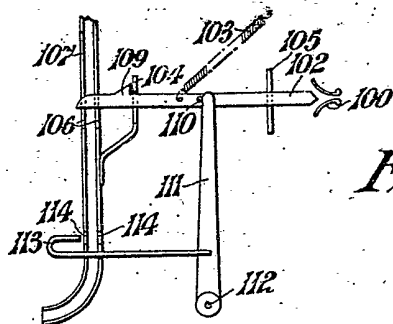


Fig. 4.

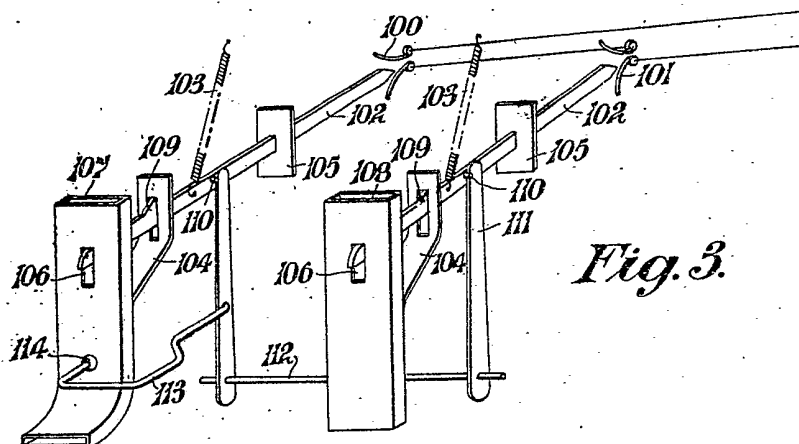


Fig. 3.

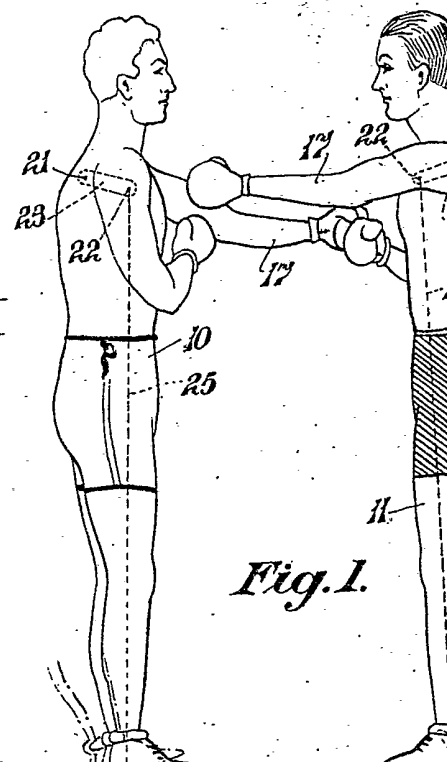
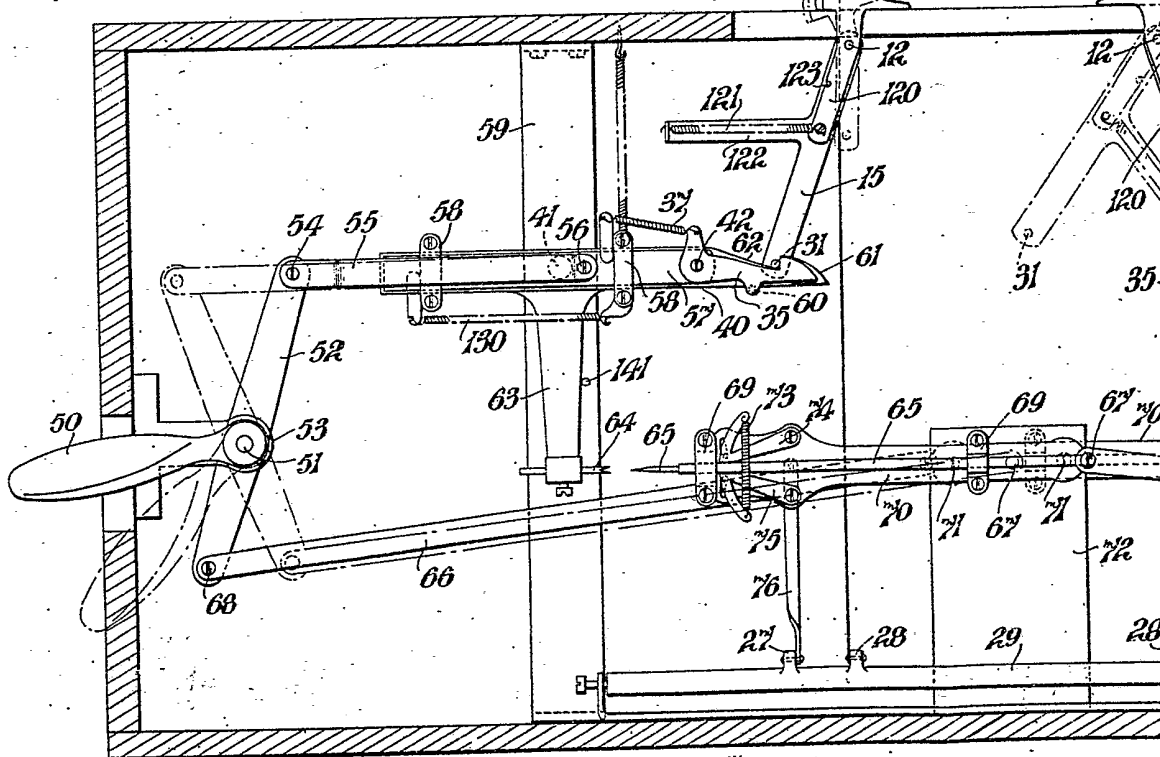


Fig. 1.



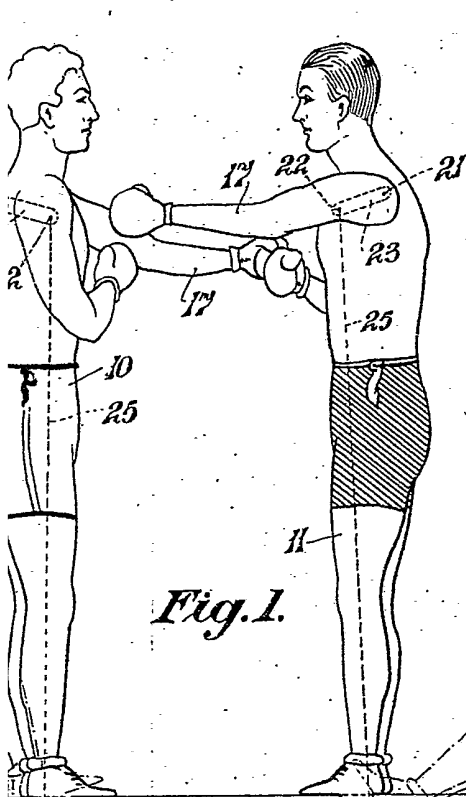


Fig. 1.

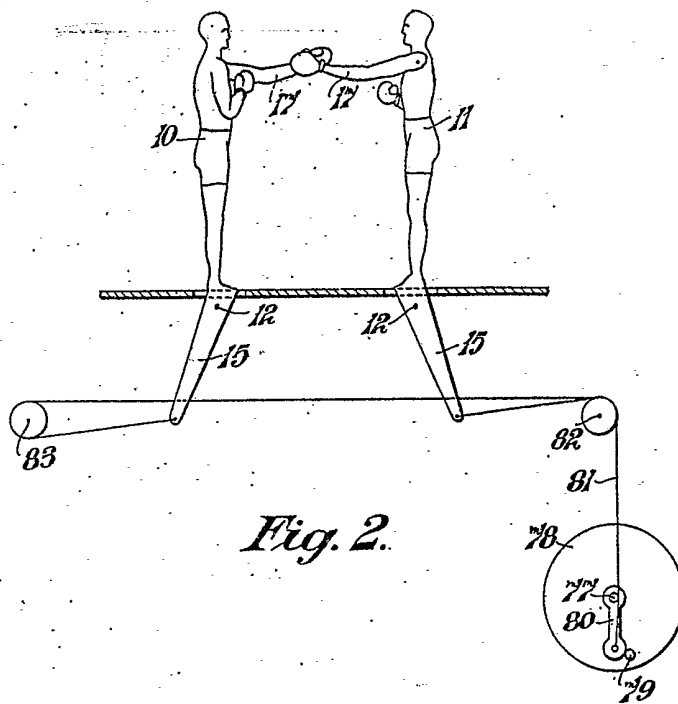
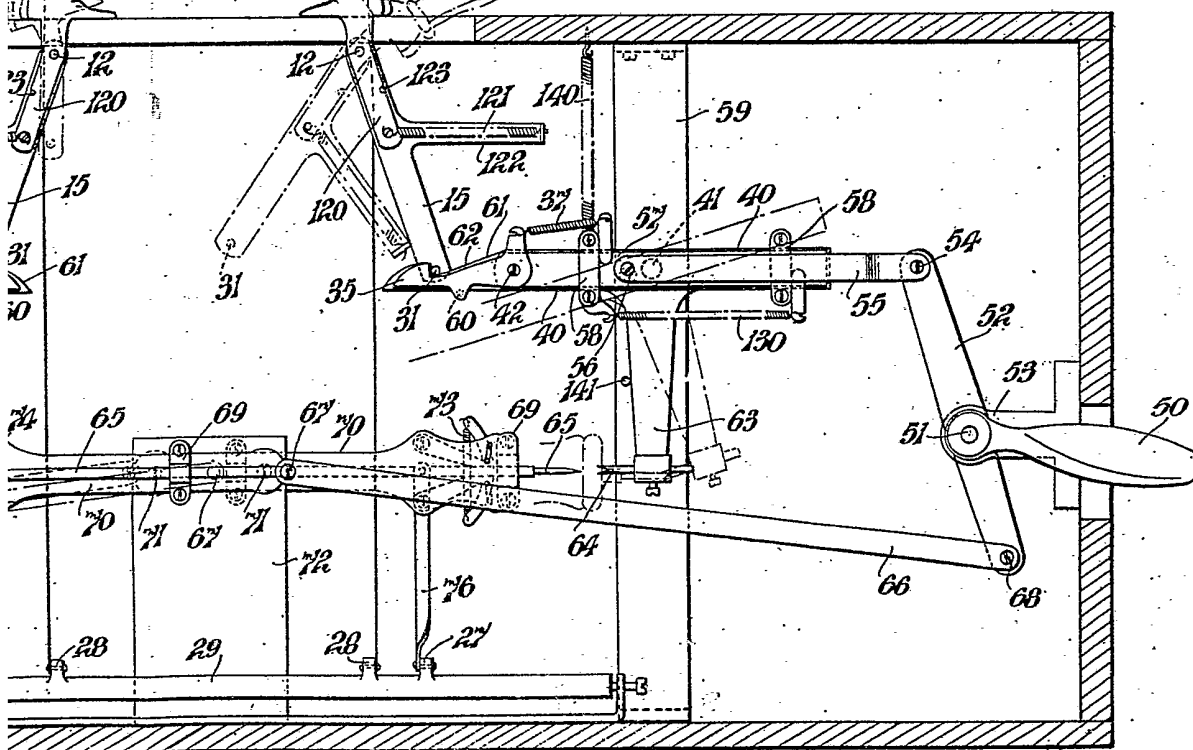


Fig. 2.



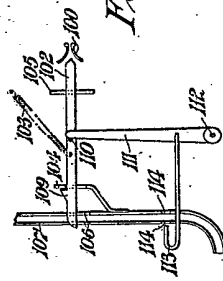


Fig. 4.

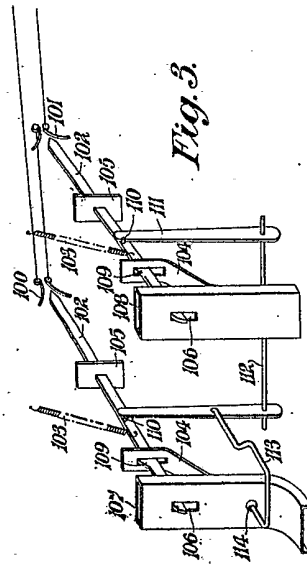


Fig. 5.

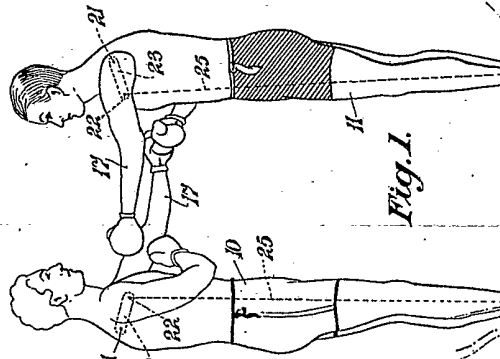


Fig. 1.

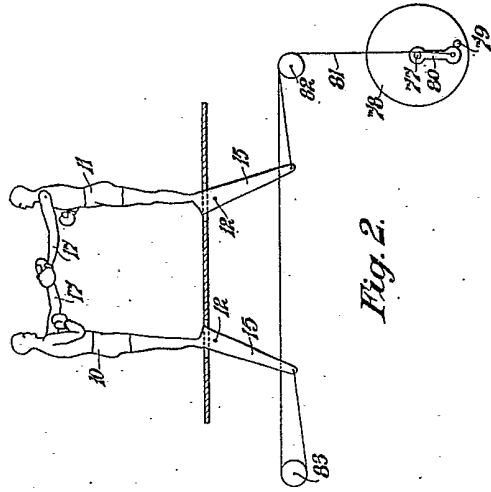


Fig. 2.

