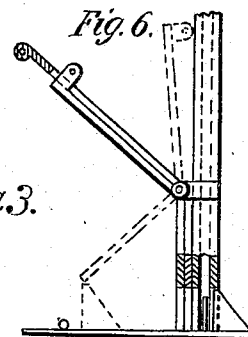
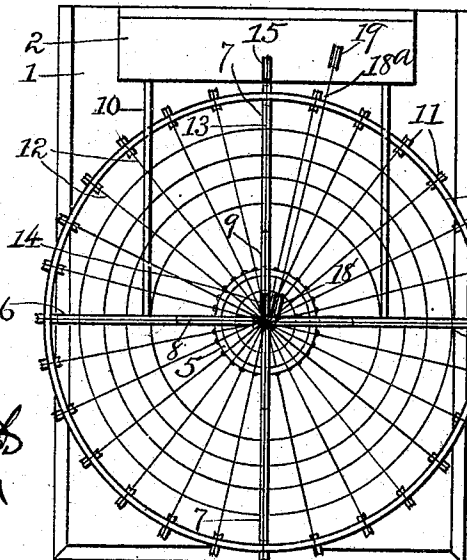
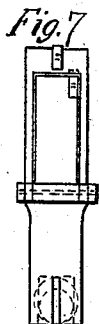
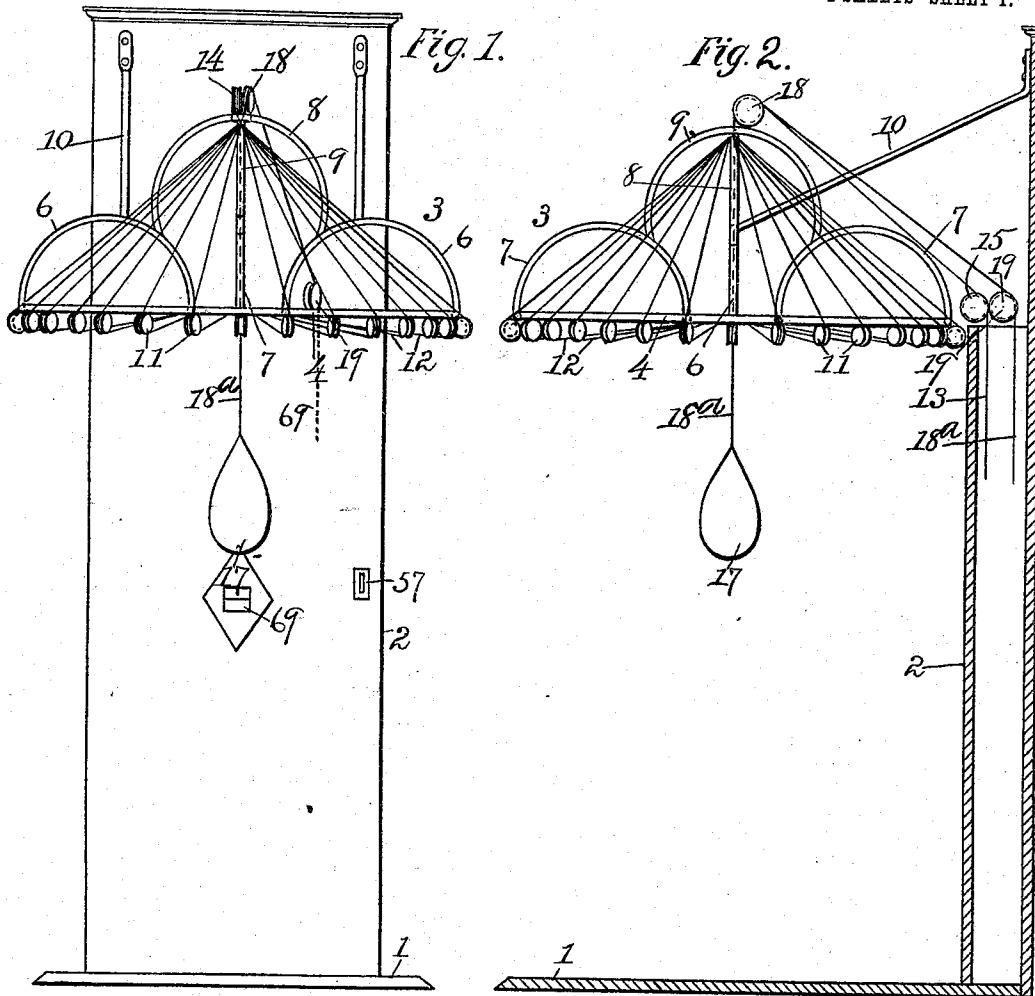


A. L. NEVELS.
 COIN CONTROLLED BAG PUNCHING MACHINE.
 APPLICATION FILED MAY 4, 1905.

933,330.

Patented Sept. 7, 1909.

2 SHEETS—SHEET 1.



Witnesses:
 S. E. Berkovitch
 J. E. Colver

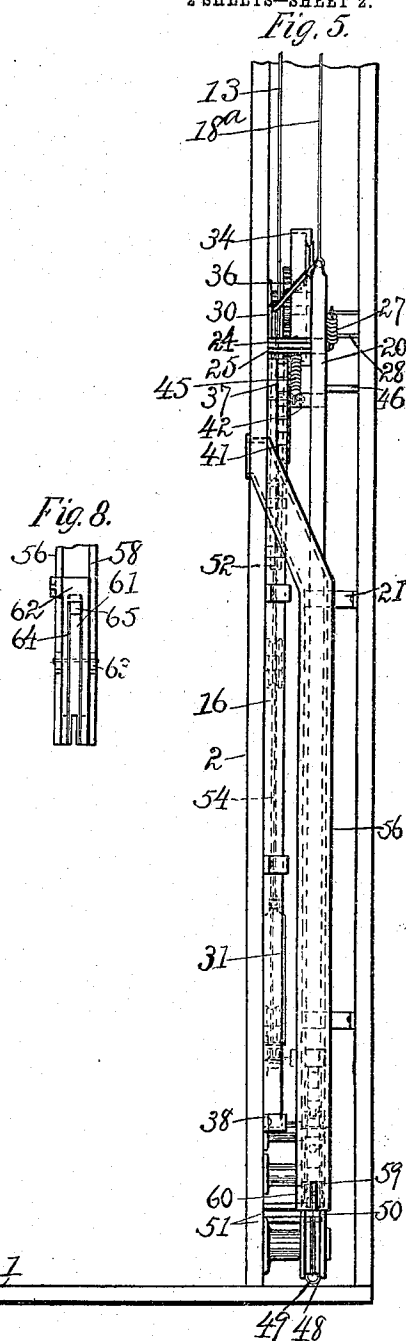
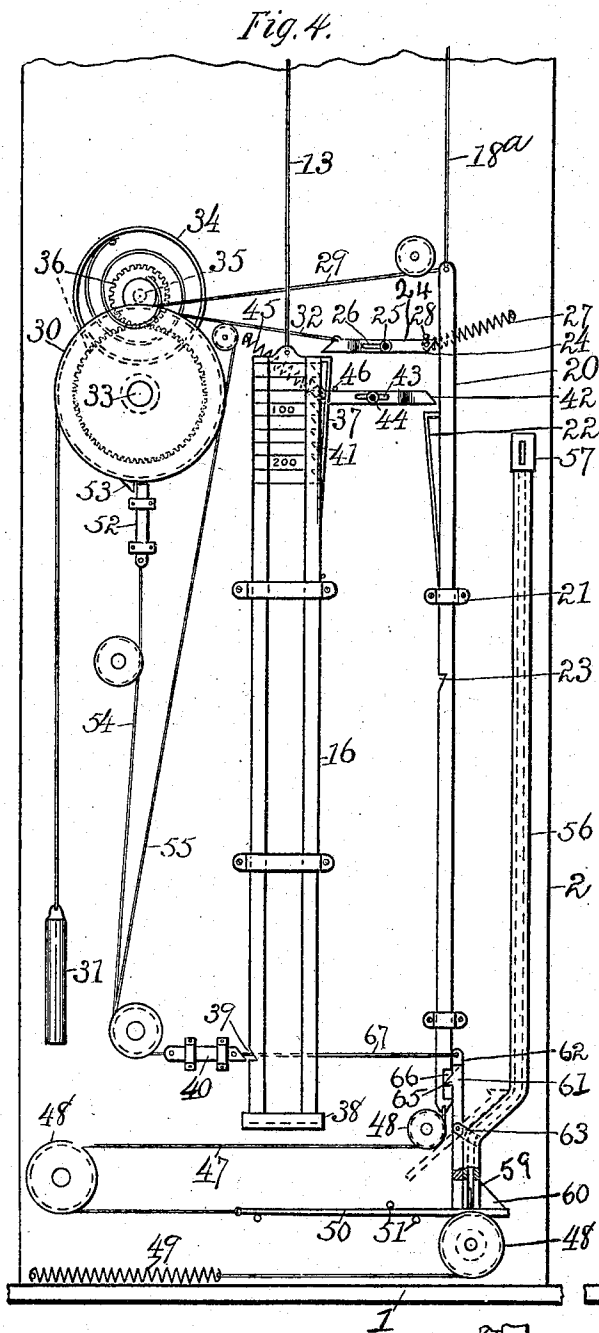
Inventor:
 Anthony L. Nevels,
 by Jenkins H. Barker,
 Attorneys.

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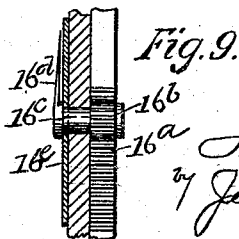
933,330.

Patented Sept. 7, 1909.

2 SHEETS—SHEET 2.



Witnesses:
 L. E. Piskovitch.
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Inventor:
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UNITED STATES PATENT OFFICE.

ANTHONY L. NEVELS, OF HARTFORD, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE NEVELS MANUFACTURING COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

COIN-CONTROLLED BAG-PUNCHING MACHINE.

933,330.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed May 4, 1905. Serial No. 258,812.

To all whom it may concern:

Be it known that I, ANTHONY L. NEVELS, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a new Coin-Controlled Bag-Punching Machine, of which the following is a specification.

My invention relates to that class of coin controlled machines which may be used for athletic purposes, and the object of my invention is to provide a device of this class in which the extent of use shall be determined by a coin of a certain value deposited in the machine; and a further object of the invention is to provide a machine of this class in which the force of a blow may be ascertained, such force being denoted without respect to the direction of movement taken by the bag after it has been struck.

A form of device in the use of which the above objects may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a view in front elevation of a device embodying my invention. Fig. 2 is a view in side elevation of the same with the case in section and mechanism removed. Fig. 3 is a top or plan view of the same. Fig. 4 is a detail view in elevation, looking from the front, and with the front wall of the case removed. Fig. 5 is a view in elevation looking from the side and with the side wall next to the observer removed. Fig. 6 is a side view of the lower end of the coin chute showing a modified form of coin operated device. Fig. 7 is a front view of the same. Fig. 8 is a detail view of the lower end of the coin chute shown in Figs. 4 and 5. Fig. 9 is a detail view showing a modified form of indicating mechanism.

In the accompanying drawings the numeral 1 denotes the base of the machine from which rises a case 2 having at the upper part a frame or hood 3. The base may be made of any form and of a size to properly support the machine as a whole. The case 2 may be made of any suitable material, but having a chamber to contain the operative parts of the device.

The hood or frame 3 includes an outer ring 4 and an inner ring 5. In its construction arches 6—7 join the outer with the inner ring, there being two oppositely dis-

posed arches 7 and a like number and disposition of arches 6, as shown in Fig. 3 of the drawings. The pairs of arches 6—7 are connected by tie arches 8—9, as shown in Figs. 1 and 2 of the drawings. Braces 10 extend from the case downward and are secured to the tops of the arches 6 for the purpose of holding the frame or hood firmly in position.

The outer ring 4 is provided with sheaves 11 about which pass cords 12. These cords are secured to the inner ring 5, and passing from said ring 5 about the sheaves 11 extend upward to a point overlying the center of the frame and of the ring 5. At this point they are connected with an indicating bar actuator 13. This actuator is preferably a flexible connection extending about the sheaves 14 and 15, as shown in Fig. 2 of the drawings, and is connected to an indicating bar 16, the purpose and operation of which will be hereinafter described.

A punching bag 17 is secured to a punching bag support 18^a. This support is preferably a flexible part extending upward and downward about the sheaves 18 and 19 into the casing 2, as does the actuator 13, where it is secured to a locking bar 20. The punching bag 17 is of a size to lie within the ring 5 but not to pass through it, the ring limiting the upward movement of the bag.

The locking bar 20 is supported to slide in loops 21 secured to the case. This locking bar has an indicating bar knockoff 22 and a notch 23 for the reception of the locking bar latch 24. This latch is supported on a stud 25 which passes through a slot in the latch. The locking bar latch spring 27 draws the latch to engage with a stop pin 28. A winding cord 29 extends from the locking bar 20 around a drum 30. This cord is preferably wrapped entirely about the drum one or more times and then extends downward to a weight 31 suspended from the end of the cord. A locking bar latch release 32, which is preferably a flexible member, is secured to the locking bar latch 24 and is connected with the winding cord 29 at a point on the periphery of the drum 30 or near the same. This drum 30 is secured to a shaft 33 that is operated preferably by a spring motor, as a spring drum 34. The spring within the spring drum 34 may

be connected with a shaft 35 that in turn is connected with the shaft 33 as by a train of gears 36.

It will be noted that as the locking bar 20 is raised as by pulling down on the punching bag 17 the drum 30 and its shaft is rotated through the winding cord 29, this putting the spring in the spring drum 34 under tension. The parts are so constructed that a movement of the locking bar 20 sufficient to engage the notch 23 with the latch 24 will give to the drum 30 at least one complete revolution, and the spring within the spring drum 34 and the train of gears are so constructed and arranged that when the drum 30 is released, by mechanism to be hereinafter described, a predetermined length of time will be required in one complete revolution of the drum 30.

The indicating bar 16 is provided with a locking bar knockoff 37. This knockoff, as is the knockoff 22, is spring actuated in one direction and is adapted to engage its latch by contact of the end of the knockoff with the latch. This knockoff 37 operates the locking bar latch 24 to release it from engagement with the locking bar 20. The indicating bar rests in its normal position on a base 38 and has a notch 39 for the reception of an indicating bar locking bolt 40. The edge of the indicating bar is provided with notches 41 for the reception of an indicating bar retaining latch 42. This latch is similarly constructed and arranged, as the latch 24, having a slot 43 receiving a stud 44, a spring 45 holding the latch normally in engagement with the stop 46. The latch is released from engagement with the notches 41 by the knockoff 22.

The locking bar 20 has secured to its lower end bag lifting mechanism consisting of a cord 47 passing about the sheaves 48 and connected to a bag lifting spring 49 secured at one end to the casing and at the other end to said cord. This cord includes in its length a sliding bar or tape 50 mounted in guides 51.

A drum locking bolt 52 is mounted appurtenant to the drum 30 and adapted to engage a shoulder 53 on the drum 30 to retain it against movement. A drum locking bolt actuating cord 54 extends from the bolt around suitable sheaves and is secured to the end of the indicating bar lock 40. An indicating bar locking bolt release 55 extends from the locking bolt 40 and is connected with the locking bar latch release 32.

A coin chute 56 is secured within the casing having a mouth 57 through which coins may be introduced to the chute. This chute extends downward and is open on its front wall, having flanges 58. This chute is designed to receive coins of different denominations and consequently of size, and while I have shown herein its construction as

adapted to receive coins of two sizes only, it will be obvious that the chute and the mechanism operating in connection with coins placed therein, may be adapted to receive coins of other denominations and size than herein shown, and to any number desired without the exercise of anything more than mere mechanical skill, and it will be understood that the mechanism herein shown and described may be multiplied or varied in construction without departing from the invention. The coin chute herein shown is adapted to receive a penny and a nickel, the coin slot 57 being of a size to admit a coin of either denomination. The coin chute has an opening 59 at the bottom through its back wall, and the coin receiving bar 50 passes underneath the end of the chute, or through said opening and has a follower 60 secured thereto. This follower extends upward from the coin receiving bar but may pass through the opening 59. Coin levers 61 and 62 are pivotally mounted in brackets 63 extending from the coin chute, these levers being mounted preferably on the same pivot. The lever 62 has an opening 64 through which the lever 61 may pass in its swinging movement. The lever 61 is designed for use in connection with the smaller coin or penny, and the lever 62 for use in connection with the larger coin or nickel.

A locking bar locking bolt 65 is located on the lever 61 to engage a recess 66 in the locking bar 20 by means of which the latter is locked against movement. This opening 66 is somewhat larger than the bolt 65 so that the locking bar 20 may have some lengthwise movement before the bolt is disengaged from its socket. This bolt is connected with the lever 61 and is operated in the movement of this lever. The indicating bar locking bolt 40 is operated in the movement of the lever 62, as by means of a connection 67 secured to each of said parts.

The operation of the device is as follows: The parts all being in active position and the punching bag 17 located within the ring 5 and a person desiring a limited use of the instrument places a penny in the slot 57. The penny travels downward along the chute and rests on the coin receiving bar 50 in front of the follower 60. The bag is now pulled downward to the position shown in Figs. 1 and 2 and through the punching bag support 18^a, the locking bar 20 is raised moving the coin receiving bar, through the cord 47, and the follower 60 secured thereto. The follower coming in contact with the penny passes it through an opening 59 in front of the coin chute against the lower end of the lever 61, swinging the latter on its pivot. This lever swings through the opening 64 in the lever 62, the coin also passing through said opening without imparting movement to the latter lever. As the lever 61 swings on

its pivot the locking bar locking bolt 65 is withdrawn from its socket 66. The socket is of a size to permit a lengthwise movement of the locking bar before disengagement of the bolt from its socket to this extent, and the bolt being disengaged from its socket the bar is moved upward until the locking bar latch 24 engages with the locking bar latch recess 23, the locking bar being thus held at the upward limit of its movement. In this movement of the locking bar the winding cord 29 has been drawn rotating the drum 30 and winding the spring within the spring drum 34, the weight 31 moving upward. This movement of the drum 30 places a slack in the locking bar latch release 32 and the indicating bar locking bolt release 55. This slack permits the locking bolt latch 24 to move forward in position to engage the recess 23 before the locking bar has reached the limit of its upward movement. The drum 30 is held against movement by the drum locking bolt 52, held in locking position by any ordinary means. The machine is now in position for operation, and a blow being struck against the bag the latter is forced upward striking the cords 12. This force against the cords draws upon the indicating bar actuator 13 and moving the indicating bar 16 upward a distance depending upon the force of the blow struck against the bag, the indicating marks 68, denoting the number of pounds represented by the force of the blow, passing the opening 69 thus indicating the force of the blow struck. The indicating bar 16, in addition to the graduations shown may also be supplied with pictures of men, and a square surrounding the opening 69 may bear the representation of a prize ring with figures therein. As the indicating bar moves upward the knockoff 37 encounters the locking bar latch 24, releasing it from engagement with the recess 23 and the locking bar moves downward under the influence of its weight and the spring 49, returning the punching bag to its position within the ring 5. It will be noted that the motor has not been disturbed in this operation but continues under spring tension. The slack in the releases 32 and 55 remains, causing the latch 24 to remain in position to engage the recesses 23, and a slack has also been placed in the winding cord 29. A nickel being now placed in the slot travels downward and rests upon the coin receiving bar 50. The bag being pulled downward the locking bar is moved upward as before, taking up the slack in the winding cord 29, and the nickel being of a size to engage the sides of the lever 62 swings the latter on its pivot. As the latter is swung the nickel also engages the lever 61, being too large to pass through the opening therein, swinging this on its pivot, thus disengaging the bolt 65 from the recess 66 allowing further upward movement of

the locking bar. This movement of the lever 62 draws upon the connection 67 and causes the indicating bar locking bolt 40 to engage the recess 39, thus taking up a little of the slack in the release 55, but otherwise unaffected it, and locking the indicating bar against upward movement. This movement of the bolt 40 through the connection 54 disengages the drum locking bolt 52 and allows the spring motor to act. The strength of the motor and the train are so proportioned that the drum will consume a predetermined length of time in completing one revolution. As it completes one revolution the stop 53 engaging the bolt 52 which has returned to locking position brings the motor to rest. During this period the bag has been accessible for use in the ordinary manner and for a time proportioned to the amount paid for such use. As blows upon the bag force it against the cord 12 no records are indicated by the indicating bar 16, as the latter has been locked against movement. As the drum rotates to unwind the motor the slack in the locking bar latch release 32 is taken up and the latch 24 thus withdrawn from the socket 23, allowing the bar to assume its normal condition as before. The slack in the indicating bar bolt release 55 has also been taken up thus operating tool move the bolt 40 from engagement with the recess 39, so that the indicating bar 16 is in condition for further operation. The parts are now returned to their inactive position.

It will be noted that when the indicating bar 16 is moved upward the indicating bar latch 42 engaging with the notches 41 holds the bar in its upward position so that the force of the blow struck upon the bag may be determined and the indicating bar is released when a coin is next inserted in the slot 57 and the locking bar 20 moved upward, the knockoff 22 thereon coming in contact with the latch 42 releasing the indicating bar and allowing it to fall to its normal position.

In the place of the opening 69, a dial 16^a with a pointer 16^a may be employed to indicate the force of a blow struck. This pointer will be secured to an arbor 16^c and having a pinion 16^b in mesh with a rack 16^a on the edge of the indicating bar.

What I claim as my invention and desire to secure by Letters Patent is—

1. In an exercising machine, a device permanently secured to the machine for use therewith and adapted to be located in an inoperative position, means for placing said device in an operative position, time mechanism controlling the location of the device in operative position for a predetermined period of time, and devices connected with the time mechanism and with the means for placing said device in operative position to permit operation of the parts.

2. In an exercising machine, a device permanently connected therewith and adapted to be located in an inoperative position, means for placing the device in an operative position, time mechanism connected therewith and arranged to limit the period of time in which said device shall remain in an operative position, and means connected with said device for allowing operation of the parts.

3. In an exercising machine, a device permanently secured thereto and adapted to be located in an inoperative position, means for placing it in an operative position, means for returning the device to its inoperative position, a time device arranged to determine the period of time during which the device shall remain in its operative position, means for starting the time device, and connections between the time mechanism and returning mechanism for operating the latter.

4. In an exercising machine, a device permanently secured to the machine and adapted to be located in inoperative position, means for moving the device to an operative position, means for returning it to its inoperative position, a time operated device connected with said return means and arranged to limit the period of time during which said device shall remain in its operative position, and means for governing the operation of the time mechanism.

5. In an exercising machine, a device permanently secured thereto and arranged for location both in an operative and in an inoperative position, time mechanism arranged to determine the period of time during which the device shall remain in its operative position, a connection between said device and the time mechanism to operate the latter in the movement of the former, a lock to hold said connection with said device in its operative position, and a lock for said time mechanism, said lock being operated by said connection.

6. In an exercising machine, a device permanently secured thereto but arranged for location both in an inoperative and in an operative position, means for locating the device in said position, means for forcing said device from said position, a lock to maintain the device in an operative position, time mechanism connected with said device and with the lock and arranged to determine the period of time during which the device shall remain in its operative position, and means connected with the time mechanism and with the lock for holding said device in its inoperative position.

7. In an exercising machine, a device permanently secured thereto and arranged for location both in an operative and in an inoperative position, time mechanism arranged to determine the period of time of location

of said device in its operative position, connections between said device and said time mechanism, means for holding said connection with said device in its operative position, means for locking said connection with said device in its operative position, and means for returning said device to its inoperative position.

8. In an exercising machine, a device permanently secured thereto and arranged for location both in an operative and in an inoperative position, time mechanism connected with said device and arranged to receive power in the movement of said device to an operative position, said time mechanism being arranged to determine the period of time of location of said device in its operative position, mechanism connected to release the time mechanism, and means for withdrawing said device to its inoperative position.

9. In an exercising machine, a device permanently connected with the machine and arranged for location both in an operative and in an inoperative position, time mechanism connected with said device to receive power by the movement thereof to an operative position, said time device determining the period of time of location of said device in its operative position, means for returning said device to its inoperative position, connections between the time mechanism and said returning device, and mechanism connected with the time mechanism to release the latter.

10. In an exercising machine, a device permanently secured thereto and arranged for location in an inoperative position, means for locating said device in an operative position, time mechanism arranged to determine the period of time of location of said device in its operative position, a connection between said device and said time mechanism, means for returning said device to its inoperative position, means for locking said connection with said device in its operative position, said connection being also arranged to impart power to the time mechanism, and mechanism connected with the time mechanism to allow operation thereof.

11. In an exercising machine, a device permanently secured thereto and normally located in an inoperative position, means for locating said device in an operative position, time mechanism arranged to determine the period of location of said device in its operative position, a connection between said device and said time mechanism arranged to impart power to said time mechanism in a movement of said device to its operative position, means for locking the parts with said device in its operative position, connections between said lock and said time mechanism, means for operating said connection to locate said device in an inopera-

tive position, connections between said lock and said time mechanism, means for locking said parts with said device in its inoperative position, and mechanism connected with said last-mentioned lock and with the time mechanism to allow operation thereof.

12. In an exercising machine, a device permanently connected therewith and adapted to be located in an inoperative position, means for locating the device in an operative position, means for determining the time of location of said device in its operative position, means for indicating use of the machine, and means operated by different agencies to allow time or indicating use of said machine.

13. In an exercising machine, a device adapted to be located in inoperative position, means for placing the device in an operative position, mechanism to determine the period of time of location of the device in its operative position, mechanism for indicating the use of the machine, and mechanism operated by different agencies to permit either time or indicating use of said machine.

14. In an exercising machine, a device permanently connected therewith and adapt-

ed to be located in an inoperative position, means for locating said device in an operative position, time mechanism and a connection between said time mechanism and said device and including means for permitting operation of said device for said period of time and for permitting said operation for a certain number of times, and means for determining the operation of said device by either of said methods.

15. In an exercising machine, a device permanently connected therewith and adapted to be located in an inoperative position, means for locating said device in an operative position, time mechanism, and a connection between said time mechanism and said device and including means for permitting operation of said device for a certain number of times and for a certain length of time, and connections between said mechanism for permitting operation for a certain number of times and for a certain length of time whereby one operates to control the other.

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