

PATENT SPECIFICATION

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PROVISIONAL SPECIFICATION.



Improvements in and relating to Coin-freed Apparatus for Playing Race Games.

I, GORDON SMITH, of "Cecildene", 34, Clieveden Road, Thorpe Bay, Essex, a British Subject, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to coin-freed apparatus for playing race games in which each of two or more figures is moved along a course—such as a race track pole, tree or the like—by means of a cord or the like wound on a windlass which is actuated by one of the competing players, and has for its object improvements by means of which the apparatus is simplified and one of the coins inserted to free the apparatus is automatically returned to the successful player.

10 These improvements comprise a novel construction of mechanism of great simplicity and efficiency having one coin-slot; means of retaining in a prize-holder one of a plurality of coins inserted to free the apparatus for each game until the game is won and means actuated by the winning figure on reaching the winning point of releasing the coin in the prize-holder so as to permit it to fall into one or other of two or more prize-delivery sheets that conveys it to a receptacle outside the apparatus adjacent to that part of the mechanism operated by the successful player.

15 According to one mode of carrying out the present invention as applied to a monkey race game, in which two figures, each representing a monkey, are adapted to race each other to the top of two trees placed side by side, the tree trunks are represented by tubes having a longitudinal slot through which a coupling part, that connects each monkey to the top of a rod within each tube, passes. These tubes are made to resemble tree trunks and are mounted on a platform above the base of the apparatus that represents a portion of a forest or the ground in which the trees are growing.

20 The rods that support the figures extend downwardly through the aforesaid platform into tubes fixed to the base of the apparatus beneath those representing the trees. Each rod is provided at its lower end with a plunger that loosely fits the lower tube and forms a dash-pot,

and a cord or the like that is led up the interior of the said lower tubes and is connected to the drum of a windlass on which it is wound by the player who controls the progress of the racing figure attached to it. In this way each of the said figures is caused to move towards the top of the tree it is represented to be climbing, as the rod to which it is connected is caused to rise from the lower tube into the one above it, by the shortening of the cord as it is wound on its windlass.

Each of the windlass-drums is mounted freely on a shaft and is adapted to be rotated step-by-step by a pawl pivoted to an arm fixed to the same shaft. This arm is connected by a link to a crank fixed to another shaft by which the aforesaid pawl arm is reciprocated when the latter shaft is rotated by a crank handle secured to one end of it, that extends outside the casing of the apparatus.

Each of the windlass-drums is provided with ratchet teeth and can be slid longitudinally along its shaft. Normally the drums occupy a position on their respective shafts in which their teeth are out of the path of their actuating pawl but can be slid into engagement therewith by mechanism that can be actuated after the required coins have been inserted. This mechanism comprises a shaft provided with forks that engage and are adapted to slide each of the windlasses along their shafts into the position in which their ratchet teeth can be operated by their respective pawls. Suitable detents are also provided to prevent the said drums unwinding when they are in the position to be operated by their pawls.

The fork-shaft is actuated by another that is provided with a hollow arm into which one of the coins inserted to free the apparatus, is directed. This hollow arm has an open slot at its outer end through which a driving arm on a shaft beneath it can pass freely so long as the hollow arm does not contain a coin.

The driving-arm shaft is adapted to be reciprocated by one of the crankshafts that reciprocate the windlass pawl-arms, through a suitable crank arm on each,

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said crank arms being connected to each other by a suitable link.

5 A slot is provided in the casing of the apparatus from which coins inserted pass into a shoot which is divided into two branches at its lower end, the entrance to which branches is obstructed by pins on both of which the first coin inserted is supported until the race is won.

10 The aforesaid coin-shoot is provided with a switch-plate that is operated by the first coin so as to cause it to divert the next coin into another shoot that guides that coin into the aforesaid hollow arm
15 wherein it is retained by the arm on the driving shaft by reason of the inclined direction of the hollow arm.

If now the driving-arm shaft is reciprocated, its arm is caused to turn the hollow-arm shaft through the coin within it. In consequence of this operation, the fork-shaft is turned by an additional arm on the hollow-arm shaft that engages an arm on the said fork-shaft, as a result of
25 which the windlasses are slid along their shafts into a position in which their ratchet teeth are in the path of their co-operating pawls which are adapted to rotate them step-by-step. The fork-shaft is retained in this position by a
30 detent arm mounted freely on a winning shaft, hereinafter referred to, that engages an arm on said fork-shaft.

35 As the windlasses are rotated they wind up the cords attached to the rods that support the monkeys which are thus caused to move upwards towards the tops of the trees.

40 At the moment the first monkey reaches the top of his tree, a disc or equivalent part on the rod that supports that monkey engages an arm on the winning shaft or a sleeve mounted on it either of which disengages the aforesaid detent from the
45 co-operating part of the fork-shaft which is immediately turned by a suitable spring in a direction to slide all the windlass-drums away from their actuating and detent pawls with the result that the
50 monkey-supporting rods return under the influence of gravity to their lowermost positions and in so doing unwind the cords that attach them to their respective windlass-drums which are now free to
55 rotate in the reverse direction.

The winning shaft is supported in suitable bearings and extends adjacently to the tops of the tubes situated beneath each of the trees. This shaft is provided with
60 an arm that extends past one of the mon-

key-supporting rods so as to be turned by its disc when it is raised sufficiently. One or more sleeves are mounted freely on the said winning shaft adjacently to the other tube or tubes, and is provided
65 with an arm that similarly extends past each of the other monkey-supporting rods so as to be engaged by its disc if it reaches the top first.

70 The winning shaft and the aforesaid sleeve or sleeves are each provided with pins, projections or other means of disengaging the fork-shaft detent when either or any of them is turned by the disc of any of the figure-supporting rods,
75 all of which are thereafter allowed to fall to their lowermost positions, as hereinbefore described.

The winning-shaft and the sleeve mounted on it are each provided with
80 another arm, one of which is connected by a link with an arm on a shaft that operates one of the coin-supporting pins in the coin-shoot and the other is similarly connected with an arm on a sleeve
85 mounted freely on the same shaft, that operates the other coin-supporting pin. This shaft and the sleeve are each provided with a second arm that is connected by a link to one of the pins that prevent
90 the first coin inserted in the apparatus from passing out of the branch it obstructs at the bottom of the coin shoot.

95 When one of these pins is sufficiently withdrawn, it allows the supported coin to fall through the branch it controls, into a return coin-shoot that delivers it into a receptacle outside the casing of the apparatus near the crank handle operated by the winning player.
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Additional figures may be mounted on the platform around the trees the monkeys are represented to be climbing. These figures may have articulated limbs and other parts connected by suitable
105 links to one or more cranks fixed to the driver-shaft or other moving parts of the apparatus so as to cause them to move at the times the parts that actuate them
110 move.

Dated this 13th day of February, 1930.

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COMPLETE SPECIFICATION.

Improvements in and relating to Coin-freed Apparatus for
Playing Race Games.

I, GORDON SMITH, of "Cecildene",
34, Cliveden Road, Thorpe Bay, Essex,
a British Subject, 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 coin-freed
apparatus for playing race games in which
each of two or more figures is moved
along a course—such as a race track, pole,
tree or the like—by means of a cord or
the like wound on a windlass which is
actuated by one of the competing players,
and has for its object improvements by
means of which the apparatus is simplified
and one of the coins inserted to free
the apparatus is automatically returned
to the successful player instead of to a
common returned-coin receptacle.

This invention comprises a novel construction of mechanism of great simplicity and efficiency comprising a plurality of windlasses each normally mounted at one end of a shaft along which they are respectively adapted to slide; ratchet teeth on said windlasses; arms provided with pawls; means rendered operable by the interposition of one of a series of inserted coins of sliding said windlasses along their respective shafts into a position to be driven step-by-step when said pawl arms are reciprocated by manually rotatable shafts connected thereto; means of retaining in a prize-holder one of the aforesaid coins until the game is won; means actuated by the winning figure on reaching the winning point for releasing the coin in the prize-holder and delivering it to the successful operator and means of restoring the apparatus to a position preparatory to commencing a new game.

The present improvements also comprise a prize-holder having two or more outlets provided with means of retaining one of the inserted coins in said prize-holder and a corresponding number of prize-delivery shoots adapted to convey the coin when released from the prize-holder to a receptacle outside the apparatus adjacent to that part of the mechanism operated by the successful player.

According to one mode of carrying out the present invention as applied to a monkey race game, in which two figures,

each representing a monkey, are adapted to race each other to the top of two trees placed side by side, the tree trunks are represented by tubes having a longitudinal slot through which a coupling part, that connects each monkey to the top of a rod within each tube, passes. These tubes are made to resemble tree trunks and are mounted on a platform situated above the base of the apparatus, that represents a portion of a forest or the ground in which the trees are growing.

The rods that support the figures extend downwardly through the aforesaid platform into tubes fixed to the base of the apparatus beneath those representing the trees. Each rod is provided at its lower end with a plunger that loosely fits the lower tube and forms a dash-pot, and a cord or the like that is led up the interior of the said lower tubes and is connected to the drum of a windlass on which it is wound by the player who controls the progress of the racing figure attached to it. In this way each of the said figures is caused to move towards the top of the tree it is represented to be climbing, as the rod to which it is connected is caused to rise from the lower tube into the one above it, by the shortening of the cord as it is wound on its windlass.

Each of the windlass-drums is mounted freely on a shaft and is adapted to be rotated step-by-step by a pawl pivoted to an arm fixed to the same shaft. This arm is connected by a link to a crank fixed to another shaft by which the aforesaid pawl arm is reciprocated when the latter shaft, that extends outside the casing of the apparatus, is rotated by a crank handle secured to one end of it.

Each of the windlass-drums is provided with ratchet teeth and can be slid longitudinally along its shaft. Normally the drums occupy a position on their respective shafts in which their teeth are out of the path of their actuating pawl but can be slid into engagement therewith by mechanism that can be actuated after the required coins have been inserted. This mechanism comprises a shaft provided with forks that engage and are adapted to slide each of the windlasses along their shafts into the position in which their ratchet teeth can be operated by their respective pawls. Suitable detents are

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also provided to prevent the said drums unwinding when they are in the position to be operated by their pawls.

The fork-shaft is actuated by another that is provided with a hollow arm into which one of the coins inserted to free the apparatus, is directed. This hollow arm has an open slot at its outer end through which a driving arm on a shaft beneath it can pass freely so long as the hollow arm does not contain a coin.

The driving-arm shaft is adapted to be reciprocated by the shaft on which one of the windlass pawl-arms is mounted, through a suitable crank arm on each and a suitable link that connects them.

A slot is provided in the casing of the apparatus from which coins inserted pass into a shoot that is divided into two branches at its lower end, the entrance to which branches is obstructed by pins on both of which the first coin inserted is supported until the race is won.

The aforesaid coin-shoot is provided with a switch-plate that is operated by the first coin so as to cause it to divert the next coin into another shoot that guides that coin into the aforesaid hollow arm wherein it is retained by the arm on the driving shaft by reason of the inclined direction of the hollow arm.

If now the driving-arm shaft is reciprocated, its arm is caused to turn the hollow-arm shaft through the coin within it. In consequence of this operation, the fork-shaft is turned by an additional arm on the hollow-arm shaft that engages an arm on the said fork-shaft, as a result of which the windlasses are slid along their shafts into a position in which their ratchet teeth are in the path of their co-operating pawls which are adapted to rotate them step-by-step. The fork-shaft is retained in this position by a detent arm mounted freely on a winning shaft, hereinafter referred to, that engages an arm on said fork-shaft.

As the windlasses are rotated they wind up the cords attached to the rods that support the monkeys which are thus caused to move upwardly towards the tops of the trees.

At the moment the first monkey reaches the top of his tree, a disc or equivalent part on the rod that supports that monkey engages an arm on the winning shaft or a sleeve mounted on it either of which disengages the aforesaid detent from the co-operating part of the fork-shaft which is immediately turned by a suitable spring in a direction to slide all the windlass-drums away from their actuating and detent pawls with the result that the monkey-supporting rods return under the influence of gravity to their lowermost

positions and in so doing unwind the cords that attach them to their respective windlass-drums which are now free to rotate in the reverse direction.

The winning shaft is supported in suitable bearings and extends adjacently to the tops of the tubes situated beneath each of the trees. This shaft is provided with an arm that extends past one of the monkey-supporting rods so as to be turned by its disc when it is raised sufficiently. One or more sleeves are mounted freely on the said winning shaft adjacently to the other tube or tubes, and is provided with an arm that similarly extends past each of the other monkey-supporting rods so as to be engaged by its disc if it reaches the top first.

The winning shaft and the aforesaid sleeve or sleeves are each provided with pins, projections or other means of disengaging the fork-shaft detent when either or any of them is turned by the disc of any of the figure-supporting rods, all of which are thereafter allowed to fall to their lowermost positions, as hereinbefore described.

The winning shaft and the sleeve mounted on it are each provided with another arm, one of which is connected by a link with an arm on a shaft that operates one of the coin-supporting pins in the coin-shoot and the other is similarly connected with an arm on a sleeve mounted freely on the same shaft, that operates the other coin-supporting pin. This shaft and the sleeve are each provided with a second arm that is connected by a link to one of the pins that prevent the first coin inserted in the apparatus from passing out of the branch it obstructs at the bottom of the coin shoot.

When one of these pins is sufficiently withdrawn, it allows the supported coin to fall through the branch it controls into a return coin-shoot that delivers it into a receptacle outside the casing of the apparatus near the crank handle operated by the winning player.

Additional figures may be mounted on the platform around the trees the monkeys are represented to be climbing. These figures may have articulated limbs and other parts connected by suitable links to one or more cranks fixed to the driver-shaft or other moving parts of the apparatus so as to cause them to move at the times the parts that actuate them move.

I am aware that race-game apparatus has heretofore been proposed in which figures representing lamplighters are adapted to be moved up ladders by means of rods situated within the hollow uprights of said ladders. Said rods were raised by cords wound on a drum adapted

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to be driven by a crank through gearing mounted in a frame that could be swung by mechanism that can be actuated after the insertion of two coins into a position to gear said crank to the drum. With this arrangement one of the inserted coins is retained and returned to a single tray outside the casing of the apparatus, after one of the figures has reached the top of one of the ladders. Each figure is attached to the off-set upper end of its rods, that extend through slots in the ladder uprights, and dash-pots are provided to prevent the too rapid descent of said rods. According to another arrangement figures represented to be climbing were raised up the exterior of a slotted tube by a cord secured to said figure by a wire that extended through its slot. In this case the cord was led over a pulley inside the tube at its upper end and afterwards around other guide pulleys to a winding barrel which was driven step-by-step by a pawl actuated by a crank.

In order that the invention may be clearly understood it will now be more particularly described with reference to the accompanying drawings in which—

Fig. 1 illustrates in front elevation an apparatus for playing a monkey race game, constructed according to the present invention,

Fig. 2 is a sectional plan in the plane indicated by the broken line 2—2 in Fig. 1,

Fig. 3 is a front elevation of the mechanism shown in Fig. 2 with the base partly in section,

Figs. 4 and 5 are respectively sectional elevations in the planes indicated by the broken lines 4—4 and 5—5 in Fig. 2, and

Fig. 6 is a detail hereinafter referred to.

According to the construction illustrated by the drawings a platform *a* is supported by a frame *b* above a base-plate *c* mounted on standards *d*. The base-plate *c* supports the mechanical parts of the apparatus, hereinafter described, which are enclosed by the walls of the casing *e* and the platform *a* above them.

The tubes *f g* which are made to resemble trees are secured to the platform *a* and each is provided with a longitudinal slot *h* on its rear side through which pins *i* carried by a rod *k* within each tube extend and are adapted to support a monkey *l* whose hands and feet are secured to the said pins *i*.

Each of the rods *k* is provided at its lower ends with a plunger *m* adapted to slide in a co-axial lower tube *n* that depends from the base-plate *c*. The lower tubes *n* are closed at their lower ends so that the air within them may form a

cushion for the rods *k* when they fall, while it escapes around their respective plungers.

Each of the rods *k* is also provided with a disc *o* a short distance above its plunger near which one end of a cord *p* is attached and by means of which its rod can be raised by one of the windlasses *q* or *r*.

The windlasses *q r* are freely mounted on short shafts *s t* supported in bearings formed in the brackets *u v* on which they can turn and slide longitudinally.

Each of the windlasses *q r* is provided with two flanges *w x* at opposite end of its barrel *y*. The flange *x* which is larger in diameter than the one indicated by the reference letter *w*, is provided with a series of radial teeth 1 that extend laterally towards a pawl-arm 2 so as to be engaged by its pawl 3 when the windlass of which they form a part is moved towards it by the forked arm 4 that engages the edge of the smaller flange *w*.

The pawl arms 2 are respectively fixed to the shafts *s t* and are reciprocated by the hand wheels 5 fixed to one end of the shafts 6 that extends through the casing *e* of the apparatus. The shafts 6 are journaled in the brackets *u 7* and *v 8* respectively and have crank arms 9 at their inner ends which are respectively connected by links 10 to the pawl-arms they reciprocate. The shaft *s* is also provided with a crank-arm 11 that is connected by a link 12 to an arm 13 fixed to a shaft 14 carried in bearings formed in the flange 15 of the base plate *c*. This shaft 14 is also provided with a hooked arm 16 whose function is hereinafter explained, and a third arm 17 connected by a link 18 to a lever 19 fixed to a short shaft 20 that passes through the body of a monkey 21 who represents an umpire, on which shaft his arms 22 are mounted and caused to rise and fall rhythmically as if he were timing the climbing monkeys.

A coin-shoot 23 is secured to a bracket 24 bolted to the base-plate *c*. The upper end of this shoot is inclined downwardly from the slot 25 in the front wall of the casing and guides coins inserted into it past a switch-plate 26 pivoted within it. This switch plate normally occupies a position that allows the first coin to pass it on one side until it is stopped by two pins 27, 28 which bar the way to two outlets 29, 30. The lower end of this switch plate 26 is bent to the side on which the first coin passes and is deflected by it during the time it is supported by the pins. In this position the upper end of the switch plate deflects the second coin which is caused to pass through an opening in the side of the shoot into a flat

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hollow arm 31 fixed to a shaft 32.

The hollow arm 31 has a slot 33 at its lower end, through which the hooked arm 16 freely passes without transmitting movement to the hollow arm 31 and shaft 32 when the shaft 14 is rocked, unless a coin has been previously introduced into it.

A radial arm 34 is fixed to the shaft 32 and extends through a slot 35 in an arm 36 fixed to the shaft 37 so as to turn it when it is itself turned by the hooked arm 16 engaging a coin that has been introduced into the hollow arm 31.

The shaft 37 is supported in bearings formed in the brackets *u v* and is provided with forked arms 4 that engage the flange *w* of each of the windlasses *q r* so as to slide them along their shafts *s t* into a position to be actuated by the pawl arms 2 when the said shaft 37 is turned. This shaft is provided with two more arms one of which indicated by the reference character 38 is connected to a spring 39 anchored to a pin 40 supported by a fixed part of the apparatus, so as to normally tend to return said arm 38 and the shaft 37 to the positions shown in the drawings. The second of the additional arms 41 is provided with a pin 42 that is adapted to be engaged by a tooth 43 on a spring-controlled detent arm 44 mounted freely on the shaft 45 between the arm 46 fixed to said shaft and the sleeve 47 that is also mounted freely on this shaft. The boss 48 of the detent arm 44 is provided with a step on each of its lateral faces, one of which designated 49 is engaged by a tooth 50 on the adjacent face of the arm 46 so as to turn it and release the pin 42 on the arm 41 when the arm 44 is raised. The other step 51 is engaged by a tooth 52 on the adjacent face of the sleeve 47 so as to be turned by it for the same purpose, when the said sleeve is turned by means hereinafter explained, in the direction to cause its tooth to engage said step.

A second arm 53 fixed to the shaft 45 has a laterally extending pin 54 that projects over the upper end of the tube *n* so as to be engaged by the disc *o* on the rod *k* when it is sufficiently raised.

The sleeve 47 also has an arm 55 provided with a laterally extending pin 56 that projects over the upper end of the other tube *n* so as to be engaged by the disc *o* on the rod *k* when it is sufficiently raised. This arm 55 is connected by a link 57 to an arm 58 fixed to the shaft 59 supported in bearings formed in the brackets 60, 61, secured to the base-plate. This shaft is also provided with a depending arm 62 to the end of which the pin 27 is pivoted. The arm 46 secured to the

shaft 45 is connected by a link 63 to an arm 64 fixed to a sleeve 65 mounted freely on the shaft 59 between its arms 58 and 62.

A second arm 66 depends from the sleeve 65 to the end of which the pin 28 is pivoted.

The pawl arms 2 are off-set at their upper ends where they are bent over to form a housing for the pawl 3 that is pivoted on a pin 67, its movement being limited by a second pin 68 that extends through a slot 69 in the bent-over portion.

A detent pawl 70 is pivoted in a U-shaped housing 71 secured to each of the brackets *u v* and co-operates with the teeth 1 on the windlasses *q r* to prevent them running back during the time they are being rotated step-by-step by the reciprocation of the pawl arms.

After two coins have been inserted in the slot 25 and the second one has entered the hollow arm 31 in which it is retained by the hooked arm 16 beneath it, both players rotate the shafts 6 by means of the crank pin 72 on the disc 5 mounted on the end of each of the said shafts that project through the casing *e* of the apparatus.

As a result of the rotation of the shafts 6, the pawl arms 2 will be reciprocated by the crank arms 9 which are connected to them by the links 10.

The movement of one of the pawl arms 2 will cause the rocking of the hooked-arm 16 on the shaft 14 which is connected to the shaft *s* on which the said pawl-arm is mounted, by the link 12 and the arms 13 and 11 respectively fixed to the said shafts.

As the coin in the hollow arm 31 closes the slot 33, the motion of the hooked-arm 16 will be transmitted to the said hollow arm 31 and through it to the shaft 32 which will turn the shaft 37 by reason of the engagement of the radial arm 34 with the slotted lever 36 mounted on the shaft 37 which on turning will move the windlasses *q r* into a position to be rotated, owing to the engagement of the forked arms 4 with the flanges *w* of the windlasses which will be retained in their operative positions by the detent arm 44.

During the rotation of the windlasses the cords *p* will be wound on their barrels *y* and the rods *k* will rise until the disc *o* on the one that reaches the top first engages one or other of the arms 53 or 55.

When the arm 53 is raised by the disc *o* on the rod *k* associated with it, the arm 46 will turn the sleeve 65 through the link 63 connected to an arm 64 attached to said sleeve and to the arm 46 on the shaft 45, and when the arm 55 on the sleeve 47 is raised by the disc *o* on the rod *k*

associated with it, that arm will turn the shaft 59 through the link 57 connected to it and to the arm 58 on the said shaft 59.

5 In this way the pin 27 will be withdrawn when the shaft 59 is turned and the coin in the shoot 23 will fall through the opening 29 into the shoot 30 which will convey it to a receptacle (not shown) outside
10 the casing of the apparatus adjacent to hand-wheel 5 operated by the winner. When the sleeve 65 is turned by the winning monkey, the pin 28 will be withdrawn and the coin in the shoot 23 will
15 fall through the opening 30 into the other shoot 31 by which it will be conveyed to another receptacle (not shown) outside the casing of the apparatus adjacent to the other hand-wheel 5.

20 When either of the arms 53 or 55 is raised in this way, the tooth 50 or 52 on the boss of the lever 46 or sleeve 47 will engage the step 49 or 51 on the boss of the detent arm 44 which will be raised
25 and thereby release the shaft 37 which will then be returned to the position shown in Fig. 3 of the drawings by the spring 39. By reason of this movement the windlasses *q r* will be withdrawn from
30 the position in which their teeth are engaged by the pawls 3 and 70 and will no longer support the rods *k* which will descend to the bottom of their tubes *n* and carry the monkeys attached to them
35 to the bottom of their respective trees.

It will be understood that after the hollow arm 31 has been turned by the hooked-arm 16 acting on the coin inserted into the said hollow arm, said coin falls
40 onto a cash-box 82 when the hooked-arm 16 next moves away from it.

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

1. Apparatus for playing a race game comprising a plurality of competing
50 figures; a plurality of sliding parts disposed in guide-ways and each having one of said figures secured thereto; a plurality of windlasses each mounted at one end of a shaft along which it is adapted to
55 slide; ratchet teeth on said windlasses that are normally out of the path of co-operating pawls; a flexible connection between each windlass and one of said sliding
60 parts; a plurality of manually rotatable shafts; arms provided with pawls on one of said shafts adapted to rotate said
65 windlasses step-by-step when the latter are slid longitudinally on their respective shafts into a position to be engaged by said pawls; means rendered operable by the interposition of one of a series of

inserted coins, of sliding said windlasses along their respective shafts into a position to be driven; means to impart rotation from said shafts to said windlasses
70 after the latter have been put in a condition to be driven; means operated by the winning figure or a part moving therewith for returning one of said series of
75 inserted coins to the successful operator and means for returning the parts to their initial positions substantially as described.

2. Apparatus for playing a race game according to claim 1 comprising two competing figures; two vertically sliding rods
80 disposed in vertical tubular guide-ways and a longitudinal slot in each guide-way through which means of coupling said figures to the upper end of their respective rods pass, substantially as described.

3. Apparatus for playing a race game according to claim 1 having coin-controlled means for putting the aforesaid
85 windlasses in a condition to be driven comprising a hollow arm mounted on a shaft; a hooked-arm disposed upon a
90 second shaft adapted to be oscillated by one of said manually operable shafts; a slot in said hollow arm through which said hooked-arm is normally adapted to
95 pass; a windlass shifting shaft; means of transmitting motion from said hollow arm shaft to said windlass shifting shaft; forks disposed on the windlass shifting
100 shaft and engaging said windlasses; means of guiding a coin into said hollow arm to close the slot therein to obstruct the passage of said hooked-arm therethrough in
105 order to turn said hollow-arm shaft to slide said windlasses into positions in which they can be driven, said coin being released by said hooked-arm on its return
110 movement and allowed to fall into a cash-box and means of retaining said windlasses in the position in which they can be driven until the race is won substantially as described.

4. Apparatus for playing a race game according to claims 1 and 3 having means
115 for driving said windlasses comprising a crank-arm on each manually rotatable shaft; ratchet or like teeth on each windlass; a pawl-arm disposed adjacent to each
120 windlass and adapted to engage the teeth thereon to rotate said windlass after the insertion of the requisite number of coins; a link connecting each crank-arm with one of said pawl-arms to reciprocate it and a detent pawl adapted to prevent reverse rotation of each said windlass when
125 in the position in which it can be driven, substantially as described.

5. Apparatus for playing a race game according to Claim 1 having return coin
130 delivery mechanism comprising a plurality of return coin shoots into one of

which one of the coins inserted to free the apparatus is adapted to pass; slidable pins adapted to prevent the delivery of said coin into said return shoots; a return coin mechanism operating shaft; a sleeve rotatably mounted on said shaft; a pair of arms secured to said shaft and a second pair of arms secured to said sleeve; a pivotal connection between one arm of each said pair and one of said pins; a transverse shaft; a sleeve rotatably mounted on said transverse shaft; a pair of arms secured to said transverse shaft and an arm secured to said sleeve; an abutment associated with each figure adapted to engage one arm of the pair of arms on the transverse shaft or the arm on the sleeve and links connecting the second arm of each pair of arms on the return coin mechanism operating shaft and its sleeve to the corresponding arm on the transverse shaft and its sleeve in order that the winning figure shall withdraw its associated pin from its obstructing position and permit an inserted coin to be delivered to the successful operator, substantially as described.

6. Apparatus for playing a race game according to Claims 3 and 5 having means for retaining the windlasses in their engaged positions comprising an arm on the windlass shifting shaft; a spring connected thereto and to a stationary part of the apparatus to normally urge said windlasses out of the position in which they can be driven; a second arm mounted on said shaft; a pin on said second arm; a spring-controlled detent arm mounted on the transverse shaft to retain said windlasses in the positions in which they can be driven against the influence of their associated spring and means operated by the winning figure of removing said detent arm from its operative position to permit the windlasses to assume

positions in which they cannot be driven, substantially as described.

7. Apparatus for playing a race game according to Claims 5 and 6 having means of removing the detent arm from its operative position to permit the windlasses to assume a position in which they cannot be engaged, comprising lateral projections on said detent arm adapted to be engaged by a corresponding projection on the aforesaid transverse shaft or the sleeve mounted thereon according as to which is associated with the winning figure, to remove said detent from engagement with the co-operating pin and permit the windlasses to be moved by their associated spring into positions in which they cannot be driven, substantially as described.

8. Apparatus for playing a race game according to the preceding claims having link mechanism connected between one of the manually operable shafts and a jointed display figure whereby said figure may be caused to move before the apparatus has been rendered operable for playing a game by the insertion of coins substantially as described.

9. Apparatus for playing a race game according to Claim 2 comprising lower cylindrical guideways, closed at their lower ends, for the rods supporting the aforesaid figures and plungers secured to the bottoms of said rods, substantially as and for the purpose described.

10. The combination and arrangement of parts constituting an improved race game substantially as described and as illustrated in the drawings.

Dated this 15th day of December, 1930.

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

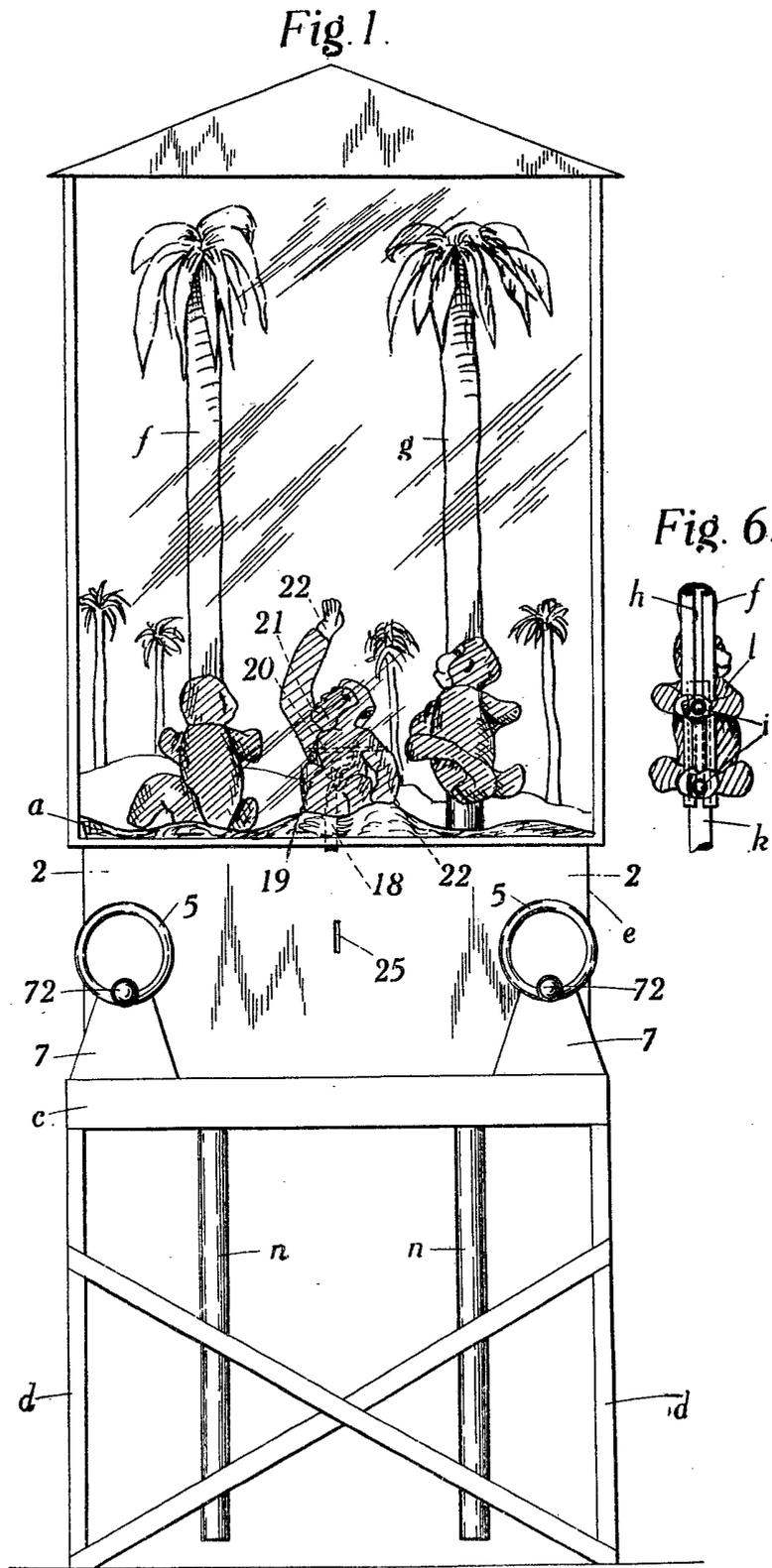


Fig. 2.

[This Drawing is a full-size reproduction of the Original.]

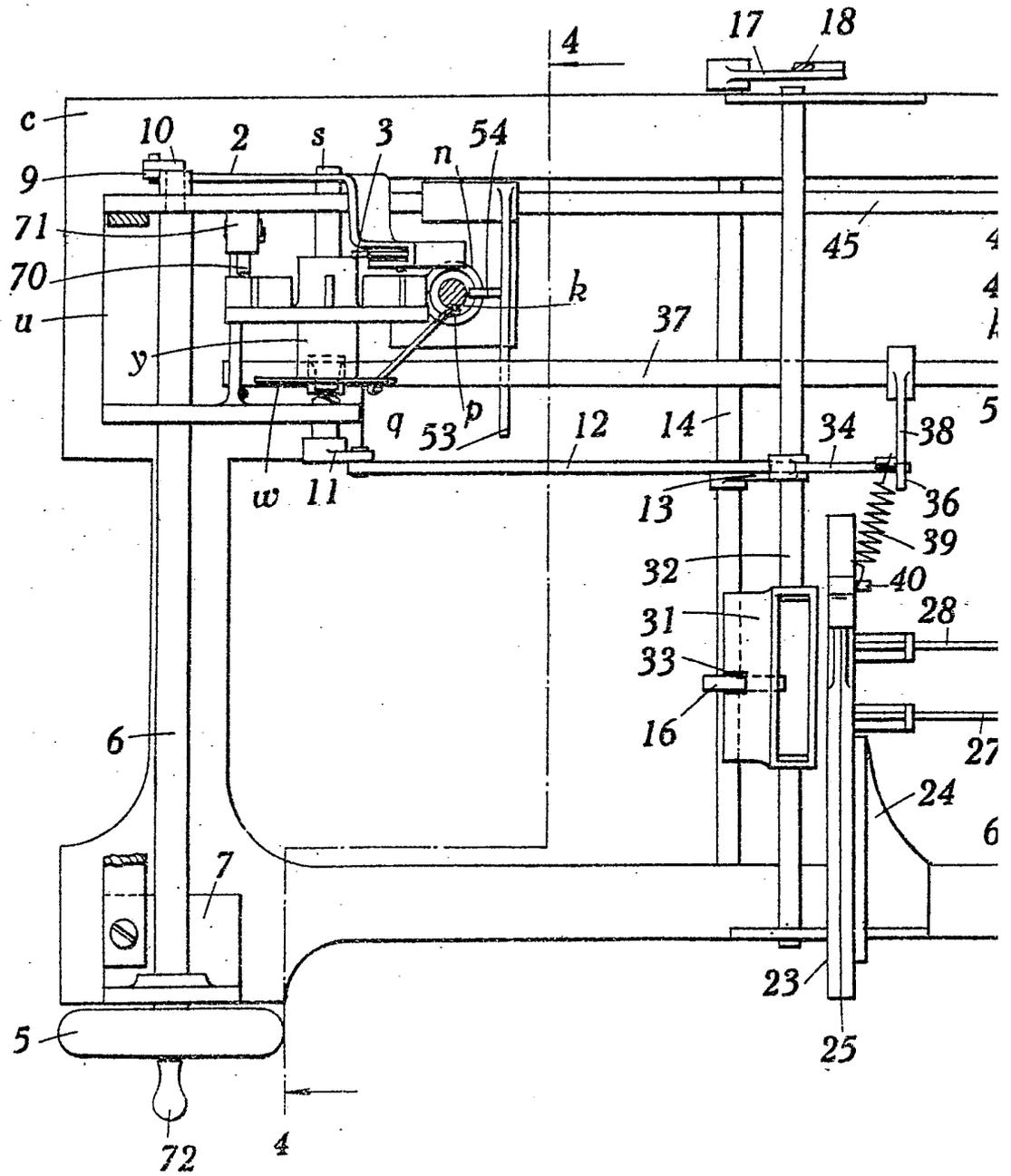


Fig. 2.

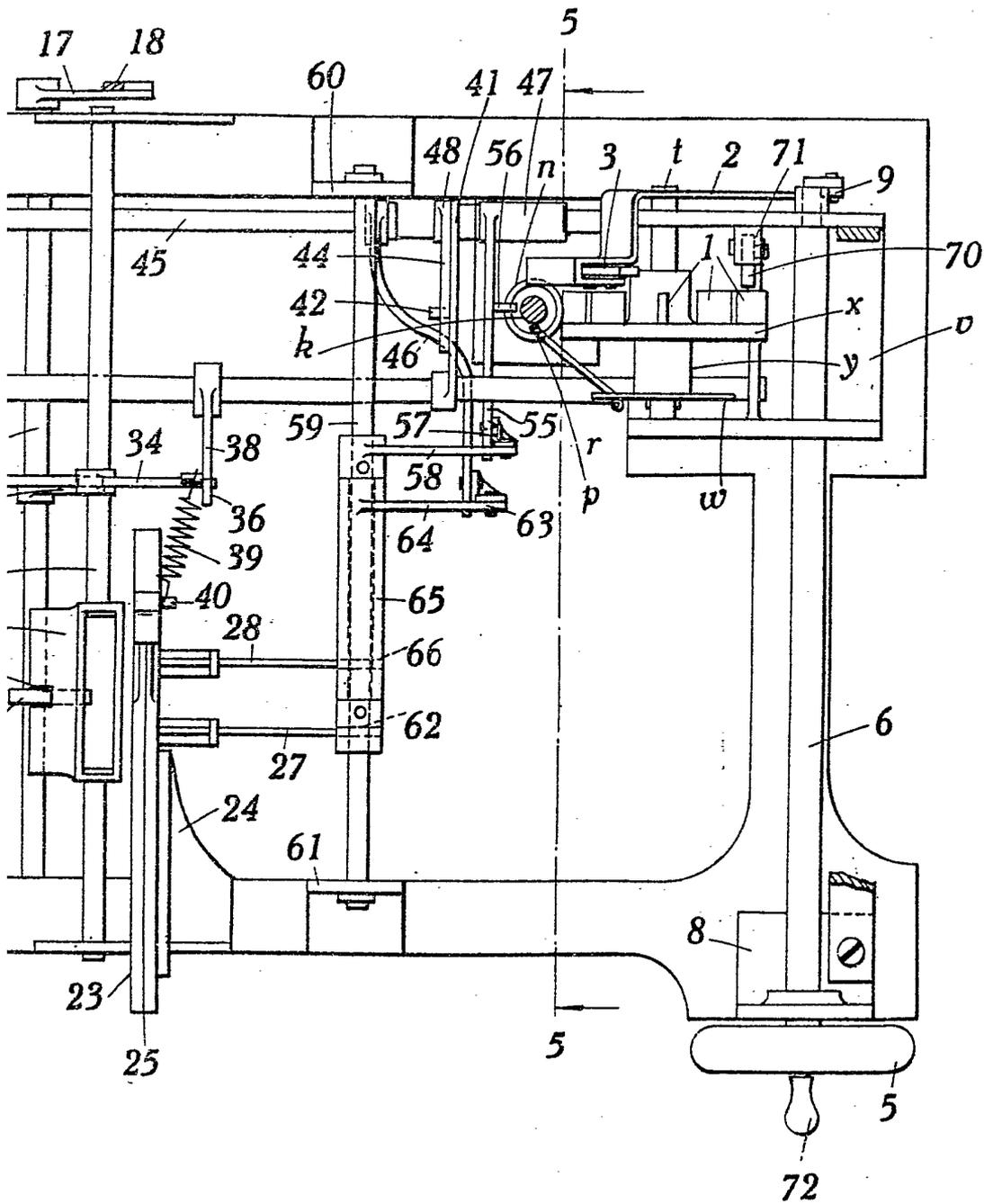
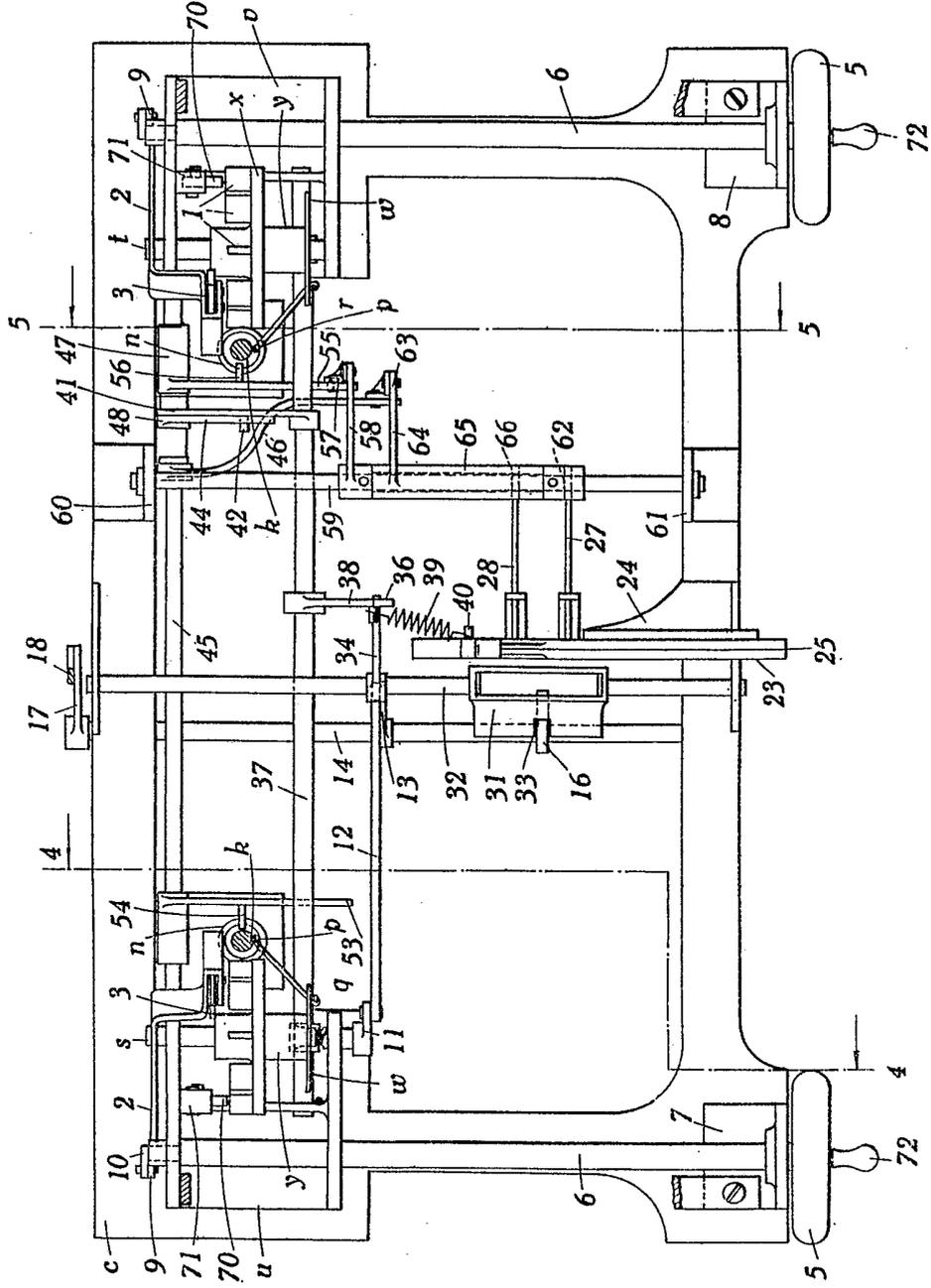


Fig. 2.



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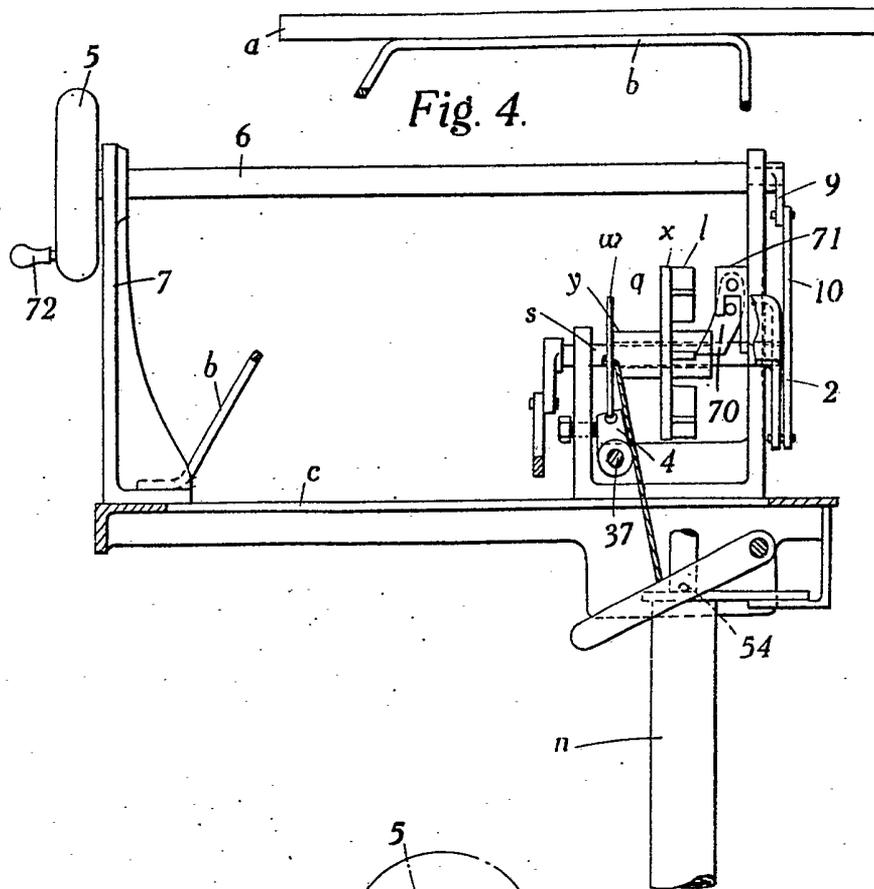
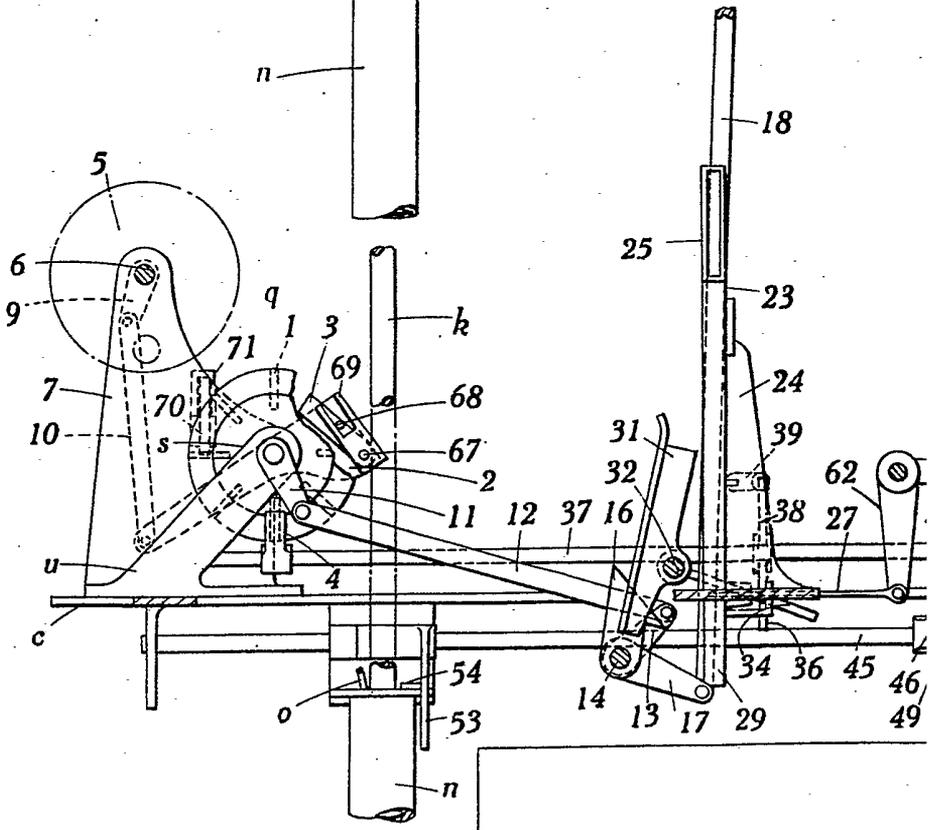
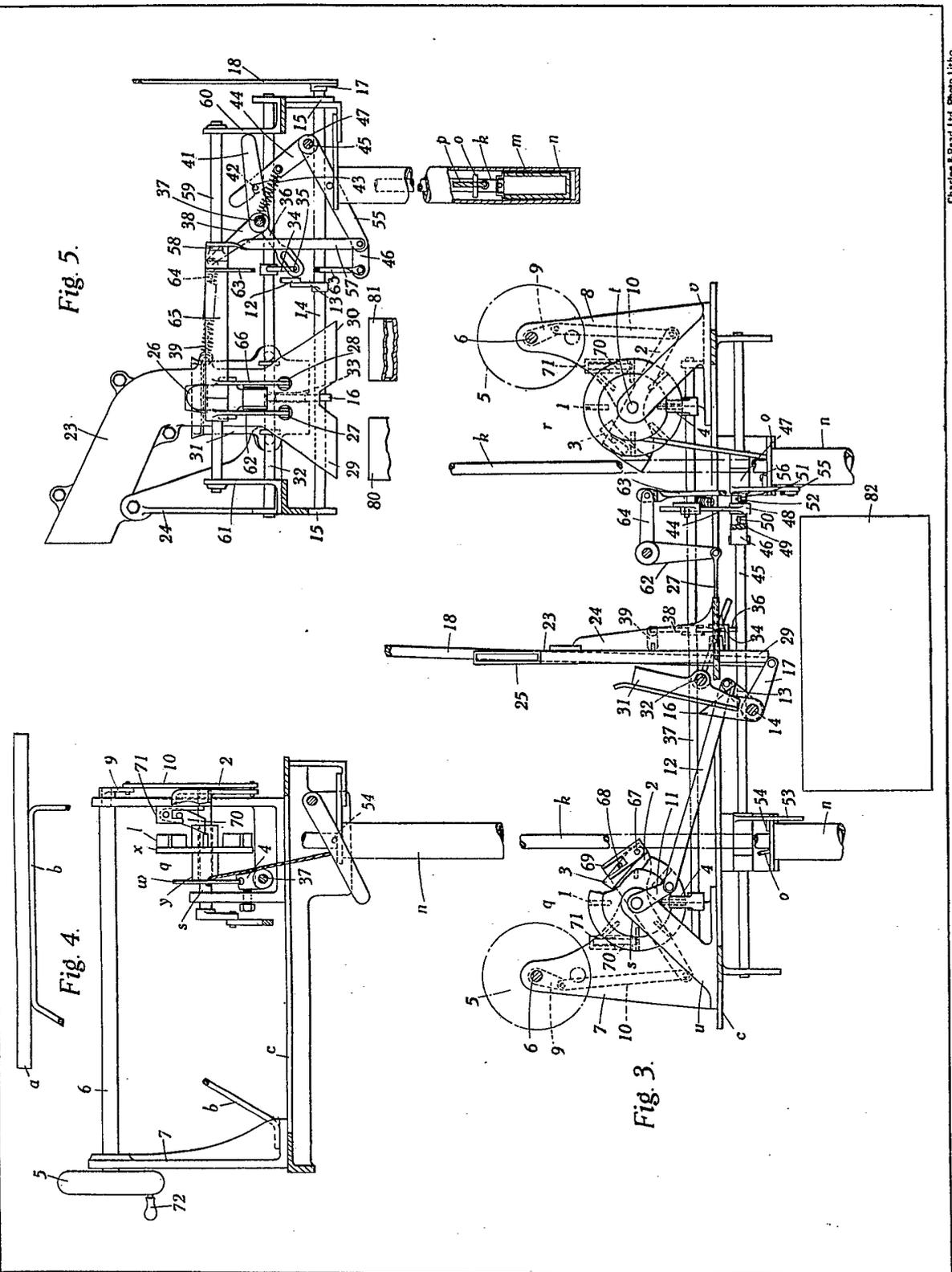


Fig. 4.

Fig. 3.





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