June 18, 1935. J. F. MACOUREK 2,005,231

AMUSEMENT APPARATUS

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Fig. 1.

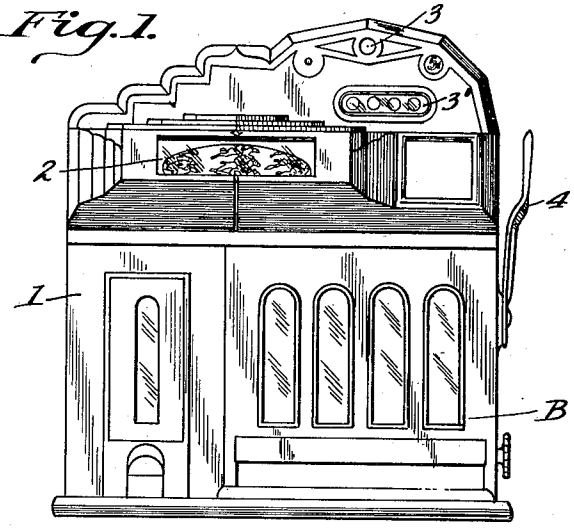
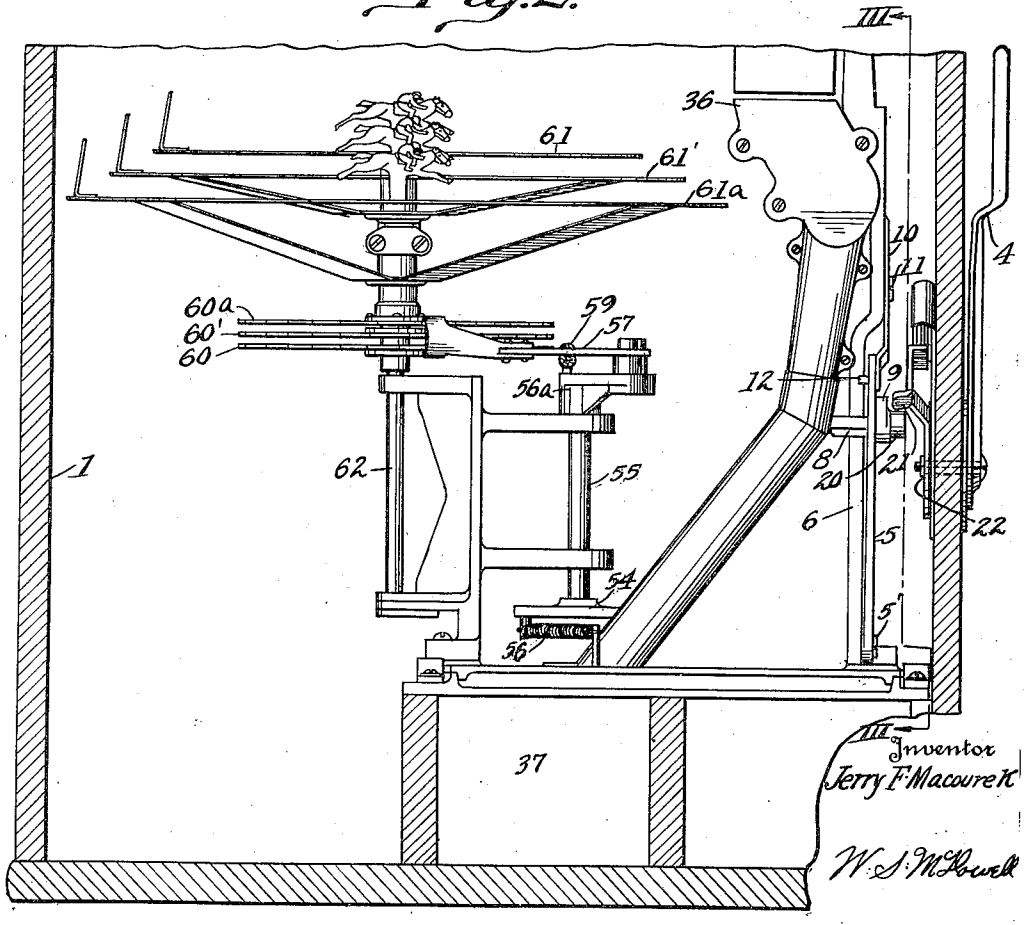


Fig. 2.



Inventor
Jerry F. Macourek

W. J. McDowell

Attorney

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AMUSEMENT APPARATUS

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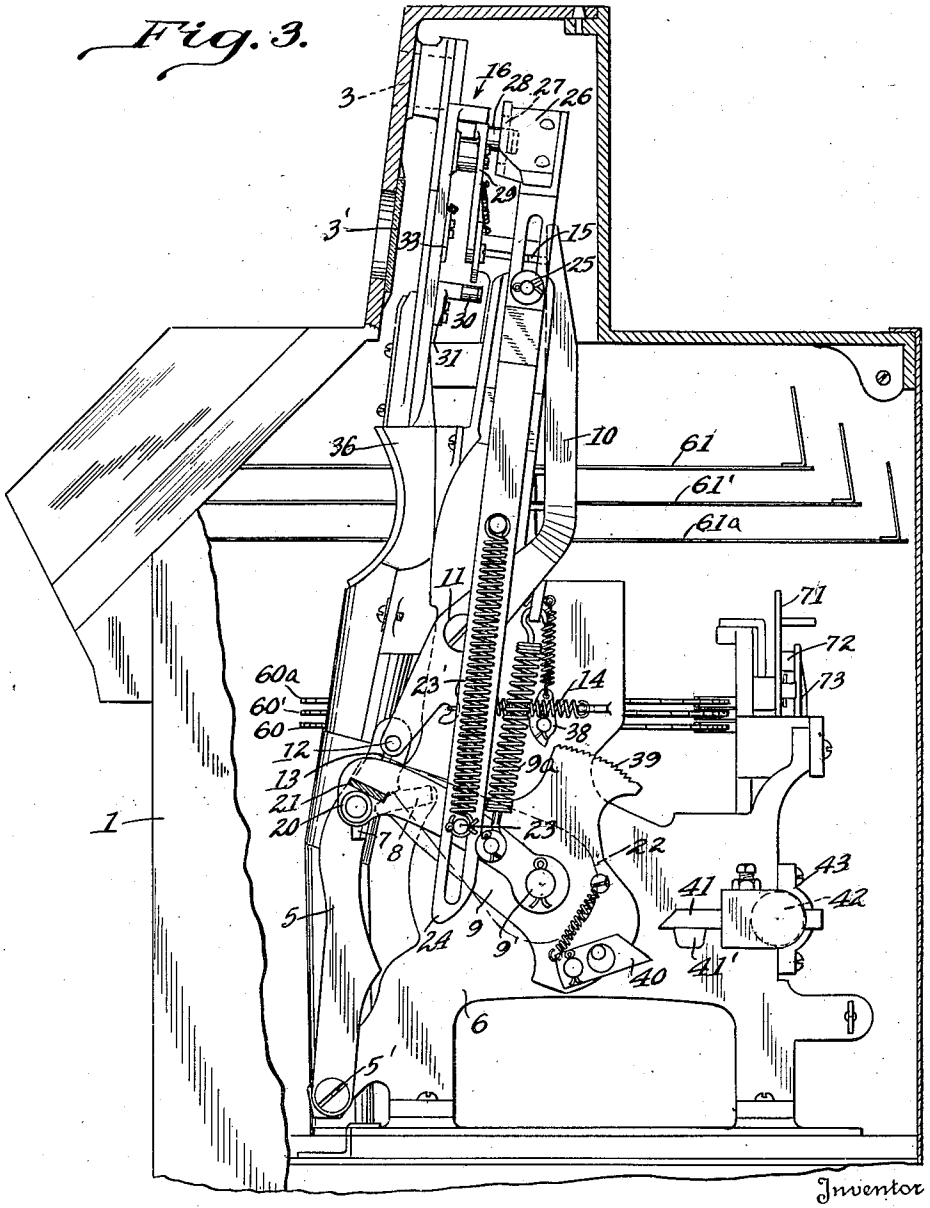
Fig. 3.



Inventor

Jerry F. Macourek

By W. S. McDowell

Attorney

June 18, 1935. J. F. MACOUREK 2,005,231

AMUSEMENT APPARATUS

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Fig. 4.

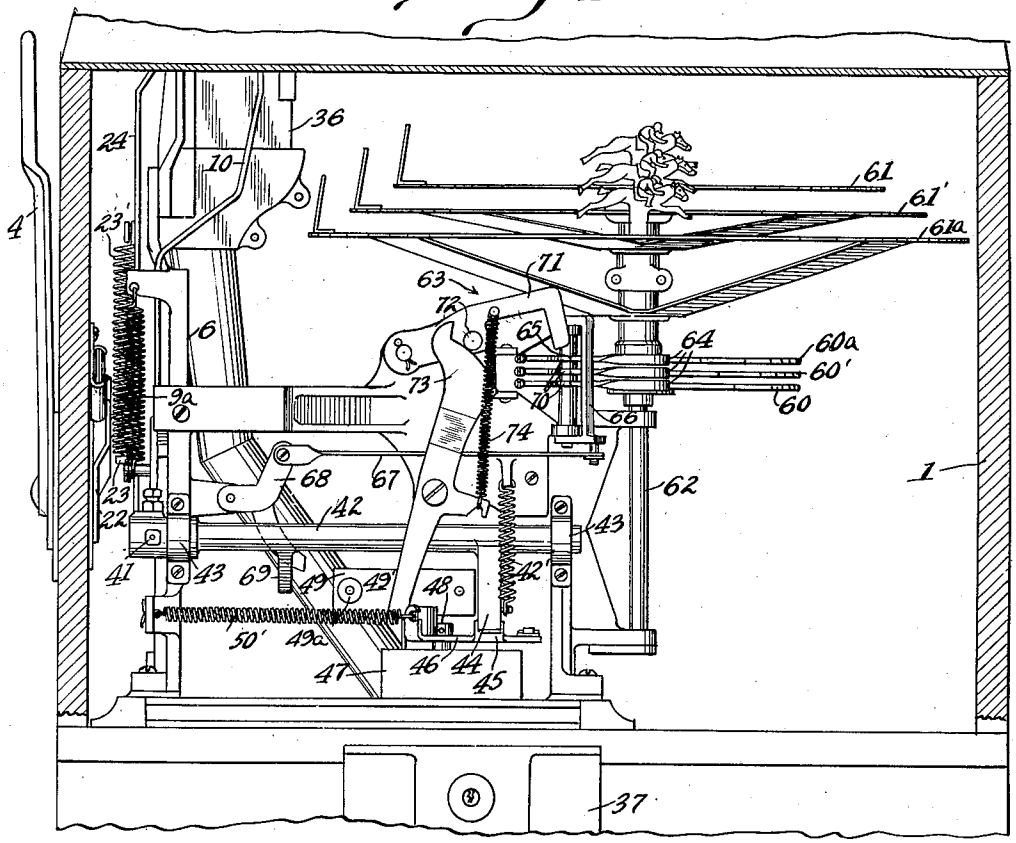
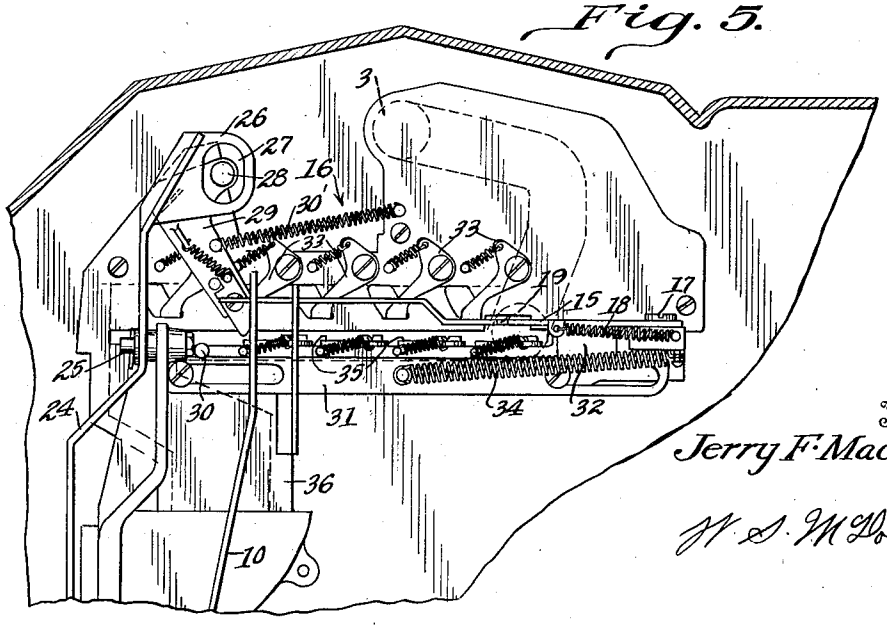


Fig. 5.



Inventor
Jerry F. Macourek

W. S. McDowell

Attorney

June 18, 1935. J. F. MACOUREK 2,005,231

AMUSEMENT APPARATUS

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Fig. 6.

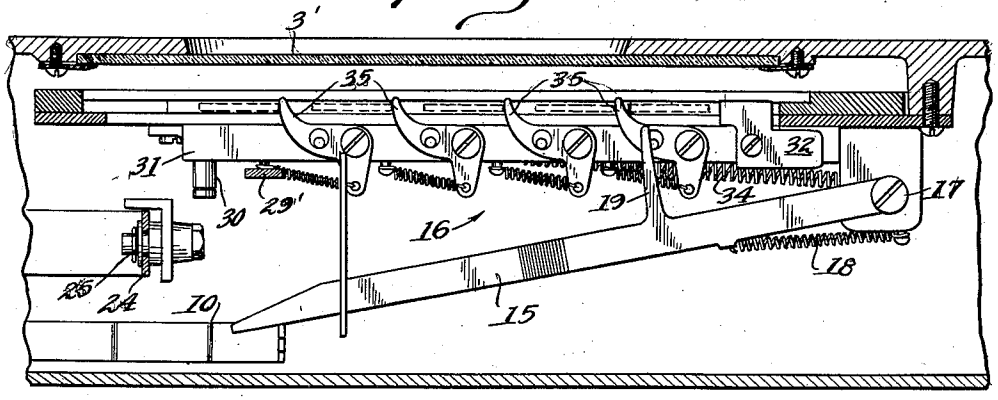
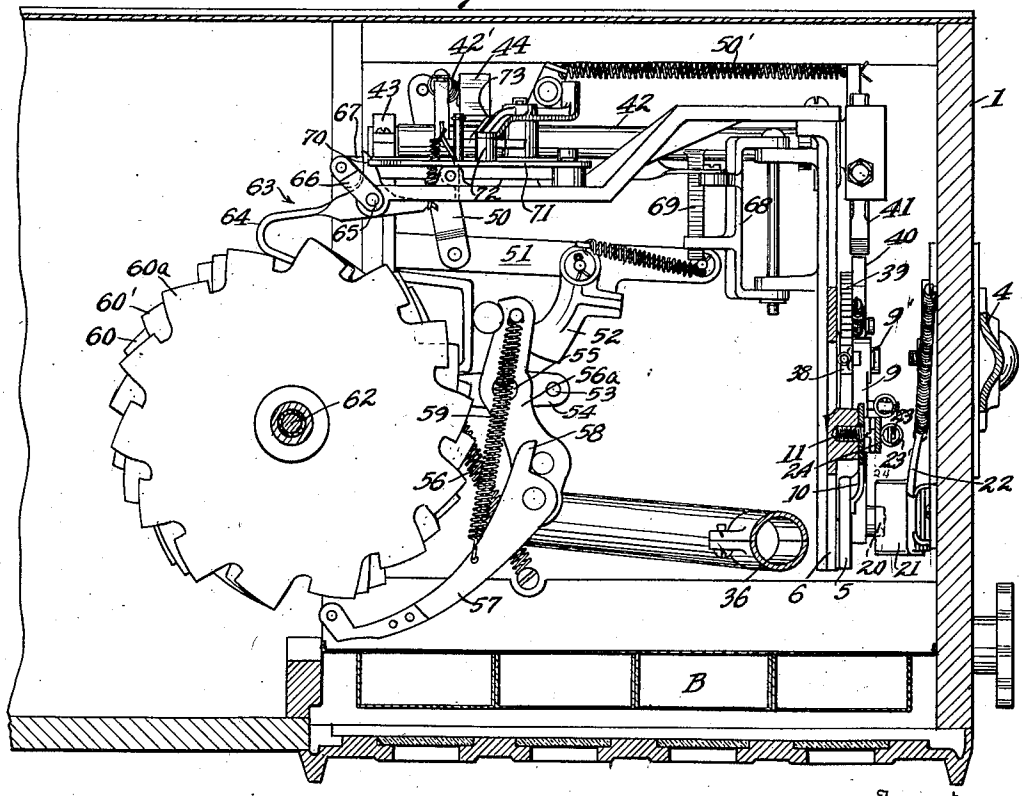


Fig. 7.



Inventor

Jerry F. Macourek

By W. S. McDowell

Attorney

June 18, 1935. J. F. MACOUREK 2,005,231

AMUSEMENT APPARATUS

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Fig. 8.

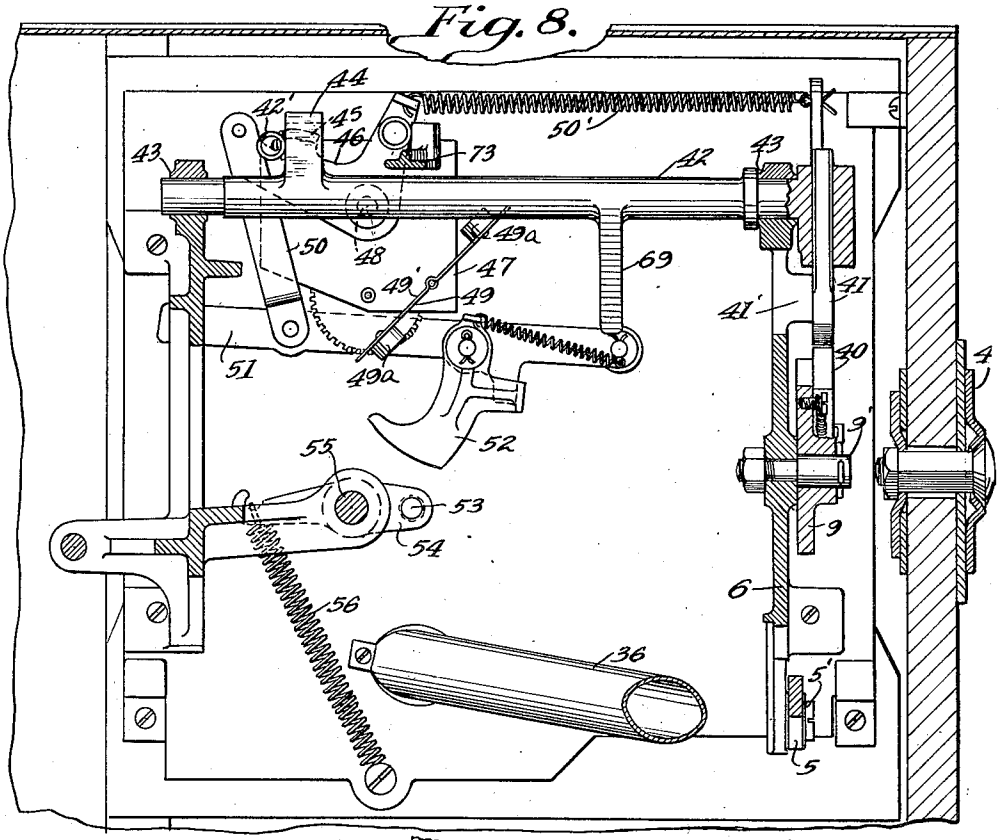
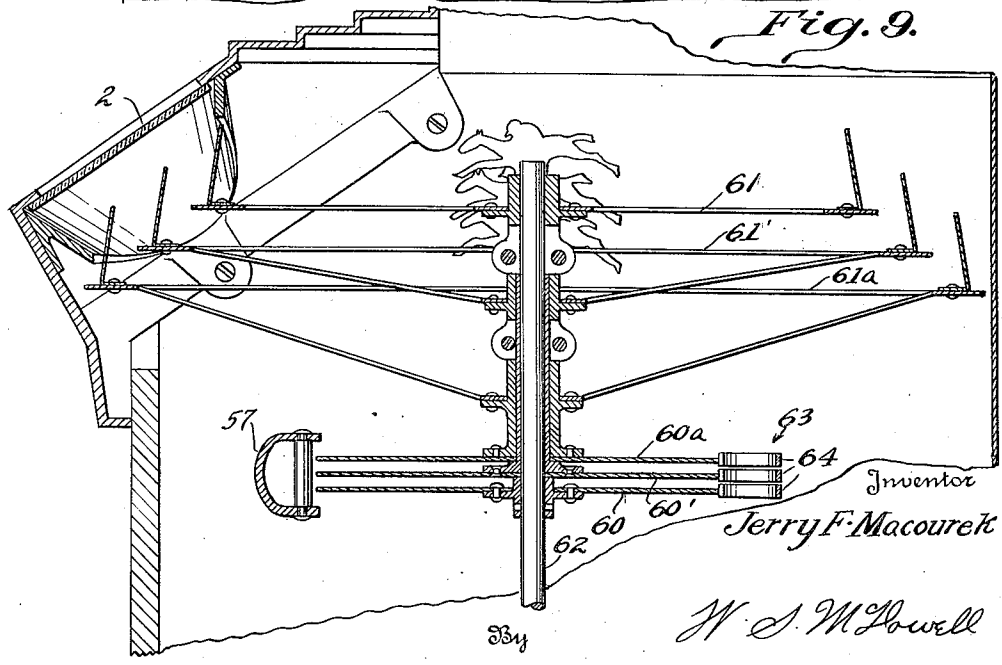


Fig. 9.



Inventor

Jerry F. Macourek

By W. J. McDowell

Attorney

June 18, 1935. J. F. MACOUREK 2,005,231

AMUSEMENT APPARATUS

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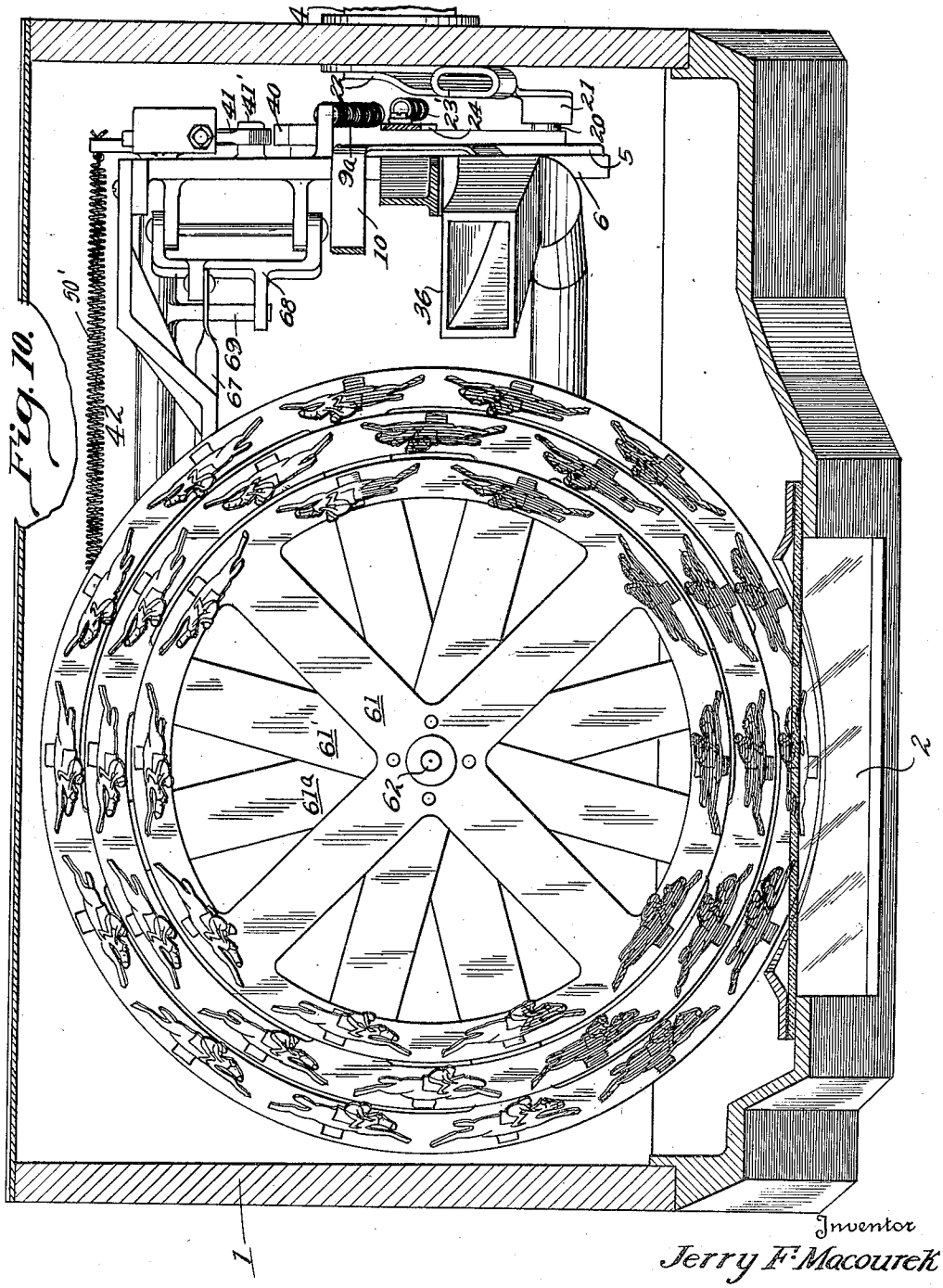

Inventor

Jerry F. Macourek

By W. S. McDowell

Attorney

Patented June 18, 1935 2,005,231

UNITED STATES PATENT OFFICE

2,005,231

AMUSEMENT APPARATUS

Jerry F. Macourek, Columbus, Ohio, assignor to Gustavus W. Snyder, Columbus, Ohio

Application July 21, 1934, Serial No. 736,382

1 Claim. (Cl. 273—142)

The present invention relates to mechanical amusement furnishing apparatus and has particular reference to amusement apparatus adapted for association with coin controlled vending machines for the purpose of promoting use of such machines and to stimulate sales therefrom.

It is an object of the present invention to provide amusement apparatus of the above character wherein is involved a plurality of spinning supports, rotatable about a common axis and wherein the said supports are of different diameter and arranged in different planes of rotation so that racing figures of uniform height, mounted in circularly spaced order on the peripheral portions of said supports may be presented to view through the sight opening in the cabinet of the machine in which the apparatus is contained in an improved manner and capable of being readily and clearly viewed by the operator of the apparatus.

Another object of the invention resides in the provision of coin released actuating mechanism for imparting simultaneous rotation to the spinning supports on which the racing figures are carried, together with improved means for effecting the stopping of said supports in varied sequence so that the outcome of any given operation of the racing figures will be unknown to the player or players of the apparatus.

For a further understanding of the invention, reference is to be had to the following description and the accompanying drawings, wherein:

Fig. 1 is a view in front elevation of the cabinet containing the vending and amusement furnishing apparatus comprising the present invention;

Fig. 2 is a vertical longitudinal sectional view taken through the cabinet and disclosing more particularly the rotatable spinners or supports on which the racing figures are mounted;

Fig. 3 is a vertical transverse sectional view taken through the cabinet on the plane indicated by the line III—III of Fig. 2;

Fig. 4 is a vertical longitudinal sectional view taken through the cabinet looking toward the internal apparatus disposed within the cabinet from the rear, the apparatus being disclosed in rear elevation;

Fig. 5 is a detail vertical sectional view through the coin advancing mechanism;

Fig. 6 is a horizontal sectional view taken through the coin advancing mechanism;

Fig. 7 is a horizontal sectional view taken through the cabinet and disclosing more particularly the mechanism for imparting rotation to the game figure spinners and the means for arresting such rotation;

Fig. 8 is a horizontal sectional view taken through the lower portion of the cabinet and disclosing the rock shaft and associated timing means for imparting rotation to the game spinners and regulating such rotation;

Fig. 9 is a vertical transverse sectional view taken through the game spinners and their axial supporting means;

Fig. 10 is a horizontal sectional view taken through the upper portion of the cabinet and disclosing the game figure spinners in elevation.

Referring more particularly to the drawings, the numeral 1 designates the cabinet which contains the mechanical amusement furnishing apparatus forming the subject matter of the present invention, and which is preferably used in conjunction with merchandise vending means, indicated at B, also disposed within the cabinet. The front of this cabinet is provided with a glazed window opening 2 through which the action of the racing objects, constituting the salient elements of the apparatus, may be viewed and the results of the race determined. Also arranged in the front of the cabinet at the top thereof is an opening 3 into which the coin, check, token or other actuating piece used in playing the device is inserted. Another elongated glazed window 3' is arranged below the opening 3 through which the operator of the machine can observe the movement of his coin or token as it is advanced into the machine. An operating hand lever 4 is provided on one side of the cabinet and is used to put the racing objects in motion following the insertion of a coin or check, also to control the release of the vending means.

To prevent the operation of the machine until a coin or token has been inserted, I provide a lock lever 5 fulcrumed at its lower end as at 5' to the frame 6 of the machine. A notch 7 formed in the lever 5 receives a lug 8 cast on the back of a power transmitting lever 9, pivoted as at 9' to the frame 6, and prevents its operation until a proper coin has been inserted. A bent arm 10 pivoted as at 11 is connected at its lower end to the lock lever 5 by a pin 12 sliding in a slot 13. A tension spring 14 pulls the levers rearwardly and positions the notch 7 in the path of the lug 8. To provide for the release of the lever 9, the upper end of the arm 10 presses against a horizontally arranged lever 15 located immediately behind the coin mechanism 16. The lever 15, as shown in Fig. 6, is pivoted as at 17 and a ten-

sion spring 18 holds its outer end in contact with the upper end of the arm 10.

A finger 19, formed on the lever 15 and projecting toward the coin mechanism, engages a coin as shown in dotted lines in Fig. 6. This arrests the movement of the lock lever 5 and permits the power transmitting lever 9 to continue its movement in response to pressure on a roller 20 applied by a lug 21 formed on a stamping 22 that is keyed to the hand lever 4.

To advance the coins inserted to a suitable receptacle, I provide the lever 9 with a pin 23, with which is yieldably connected by a coil spring 23' a flat strip 24 slidably mounted as at 25 in connection with the frame. To the upper end of the strip 24 there is attached a casting 26, as shown in Fig. 5, in which is formed an elongated opening 27 arranged to receive a roller 28 carried by a pivoted bell crank 29. When the lever 9 is depressed, the casting 26 is also drawn down and transmits movement to the bell crank lever 29. In the path of travel of the bell crank is a pin 30 carried by a slidably mounted angular bar member 31. Also secured to the member 31 at the rear thereof is an offset angular member 32 which moves the coin forward from its original position of insertion in the receptacle when the bell crank is rocked by the casting 26.

At its lower end, the bell crank 29 is provided with a pivoted detent 29' which contacts the pin 30 and when the bell crank has almost completed its travel in a forward direction, the pin will slip away from the detent, permitting the member 31 to return to its original position. When the bell crank is released by the casting 26, it will be returned to the position shown in Fig. 5 by a coil spring 30'. On this return movement, the detent will engage the pin 30 but due to its pivoted connection, will pass over the pin and stop in a working position.

Spring pressed detents 33 prevent rearward movement of the coin on the return of the member 31 in response to the action of the spring 34. Upon continued repetition of this action on the part of the member 31, a coin will be advanced step by step by the pivoted fingers 35 until it is finally discharged into the coin chute 36 which communicates with the coin drawer 37.

To insure complete movement of the lever 9, a spring actuated dog 38 cooperates with a series of ratchet teeth 39 formed in a projection provided on the lever. Pivotally mounted at the rear end of the lever 9 is a spring pressed finger 40 arranged to contact with an adjustable extension 41 carried by one end of a shaft 42 mounted for rocking movement in bearings 43. As the extension 41 is positioned in the path of movement of the finger 40, it will be rocked upwardly thereby until its forward end moves out of this path when it will move downward again in response to force applied to the shaft 42 by suitable springs.

A lug 41' cast on the side of the frame limits the backward rotation of the shaft 42 so that the extension 41 will be in proper position at the beginning of every operation.

Integrally formed with the shaft 42 is a downwardly and outwardly directed projection 44 which swings in unison with the shaft when the same is rocked. Situated in the path of travel of the projection 44 is a raised lug 45 formed on an angular stamping 46, which is connected with the timing mechanism 47 by a shaft 48. The connection between the shaft 48 and the timing mechanism is such that it will permit free movement in a forward direction but when backward movement is started, a clutch member will connect the governor 49 with the shaft 48 through suitable gearing to effect a slow return of the shaft 42 to its original position.

The governor 49 consists of a flat plate 49' to which is attached at each end a weight 49a. When the plate 46 is moved in a forward direction, a spring 50' which connects the plate 46 with the frame is stretched and when the pressure of the projection 44 on the plate 46 is removed, this spring tends to return the plate to its normal position. This sets the governor in rotation and the centrifugal force set up by the weights controls the speed of movement of the plate.

Also connected to the stamping 46 by means of the link 50 is a flat lever 51 which carries, substantially midway between its fulcrum and the connection to the link, a cam shaped pivoted dog member 52. This dog member when moved forward by the lever 51 engages with a pin 53 set in one end of a bar 54 rigidly secured to the lower end of a vertical shaft 55. A spring 56 connected between the other end of the bar and the frame of the machine tends to resist turning movement of the shaft 55 by the dog member 52 and when the shaft is turned, will return it to its original position when the pin is released from contact with the dog member. Due to the fact that the dog member is pivoted, it can pass the pin 53 on its return stroke but the lug on the lever which meets with the projection on the dog forms a rigid connection when the lever is moved in a forward direction.

Carried at the upper end of the shaft 55 is an arm 56a to which is pivoted the spinning finger 57. A projection 58 on the finger engages a pin carried by the arm and is held thereagainst by the action of the spring 59 so that the finger will move in unison with the shaft until its outer end engages with the notched plates 60, 60', 60a, of the spinning mechanism after which relative movement will take place between the finger and the arm and the spring 59 will be stretched. The outer end of the spinning finger is channel shaped and is provided with a roller equipped pin so that it can readily engage the notches in the plates.

The notched plates 60, 60' and 60a are mounted for horizontal rotation and the finger 57 engages their notched edge in response to movement caused by the engagement of the cam shaped dog with the pin carried by the shaft 55. When the dog travels beyond the pin, the spring 59 will cause the finger to jerk the notched plates, causing them to spin. The finger will be moved out of the path of travel of the plates when the projection 58 meets the pin and the entire mechanism is returned to its initial position by the spring 56.

Attached to the notched plates as shown particularly in Fig. 9 are vertically spaced discs 61, 61' and 61a, each of which carries a plurality of relatively spaced circularly arranged racing objects. Each of these discs is of different size and the smallest disc 61 is arranged at the top and is connected by means of the shaft 62 with the lower notched plate 60. The next or medium sized disc 61' is connected with the middle notched plate 60' and the lower and largest disc 61a is rigidly attached to the upper notched plate 60a. It should be noted at this point that the notches in each plate correspond in number and position with the racing objects on the disc attached to it. The window opening 2 in the housing or cabinet is ar-

ranged on an angle corresponding to that formed by the difference in size and elevation of the discs so that the operator of the machine may view the action of the racing objects.

To vary the sequence of stopping of the discs following simultaneous rotation thereof, I provide a brake mechanism 63 which is arranged to cooperate with the edges of the notched plates. This mechanism includes a spring actuated, hook-shaped member 64 for each plate, pivotally mounted as at 65 in connection with the frame of the machine. Prior to the spinning operation of the discs, the brakes must be withdrawn from contact with the notched plates. To accomplish this, a yoke member 66 is also pivoted at the mounting 65 and a link 67 connects this yoke with a claw shaped lever 68 moved by a second projection 69 formed on the shaft 42. When the projection 69 is raised, the lever 68 will draw the yoke into engagement with a tongue 70 formed on each of the hook shaped members and swing the latter out of engagement with the notched plates. To hold them in this position for the proper length of time and also provide for them to be released progressively, a pivoted keeper 71 also carried by the frame is equipped with a roller 72 adapted to be engaged by a cam surfaced lever 73, the lower end of which engages another roller carried by the stamping 46. When the stamping is swung around by the projection on the shaft 42, the lower end of the lever 73 will follow the roller 72 in response to the power applied by the spring 74. This will permit the keeper 71 to drop down in back of the tongues 70 and hold them out of engagement with the plates until the stamping 46 moves back towards its original position when the cam surface on the lever 73 will raise the roller 72 and the keeper to which it is attached releasing the hook members one by one and permitting them to check the rotation of the discs.

The operation of the device is as follows:

A coin is inserted and the hand lever 4 pulled toward the front of the machine. This causes the power transmitting lever 9 to swing about its fulcrum, causing the strip 24 to actuate the coin mechanism. Continued movement of the lever 9 results in the finger 40 engaging the extension 41 and rocking the shaft 42 in a clockwise direction. The projection 44 on the shaft 42 will set the timing mechanism and at the same time the projection 69, also on the shaft 42, will disengage the brakes 64 from the notched wheels. Following this, the cam shaped dog 52 will slip off the pin 53, causing the finger 51 to spin the discs and notched plates. Further movement of the lever 9 permits the finger 40 to travel past the end of the extension 41 and the shaft 42 rocks counterclockwise by the action of the spring 42' connecting the frame and the projection 44. This releases the timing mechanism to which is connected the brake actuating mechanism. After a certain period of time has elapsed, the cam on the lever 73 will engage the roller on the keeper 71 and slowly raise it, releasing the hook-shaped braking members progressively and stopping the discs one by one and in varied sequences. The lever 9 is returned to its period of rest by the coil spring 9a when pressure is released on the handle 2. This handle must be returned to its original position before the machine can be operated again.

What is claimed is:

In a combined coin controlled vending and amusement furnishing apparatus, a cabinet having a sight opening formed therein, a plurality of spinners mounted for rotation about a substantially vertically disposed axis arranged within said cabinet, each of said spinners possessing a different diameter than the diameters of the remaining spinners, circularly arranged relatively spaced game figures carried by the outer peripheral portions of said spinners and disposed in angularly offset relationship with respect to each other, means for imparting simultaneous rotation to said spinners, and automatic means for selectively arresting the rotation of said spinners in varying sequences.

JERRY F. MACOUREK.