Dec. 11, 1951 J. D. KUSS 2,578,560

CHANCE DEVICE WITH SPIRAL CARRIER AND DISKS

Filed March 5, 1948 2 SHEETS—SHEET 1

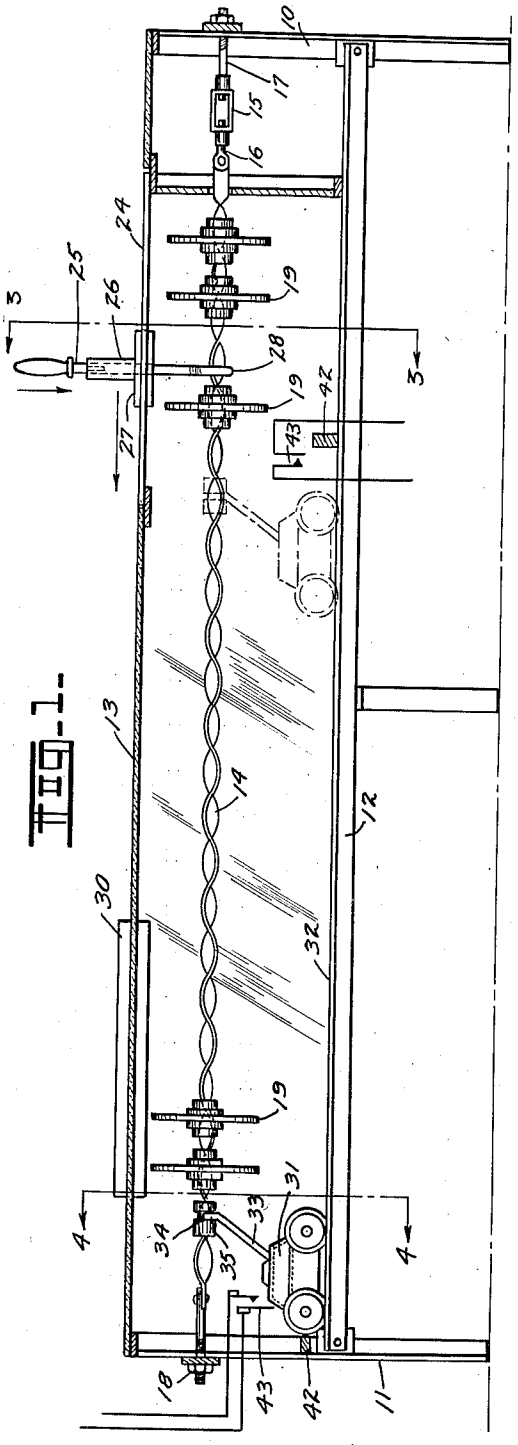


FIG. 1.

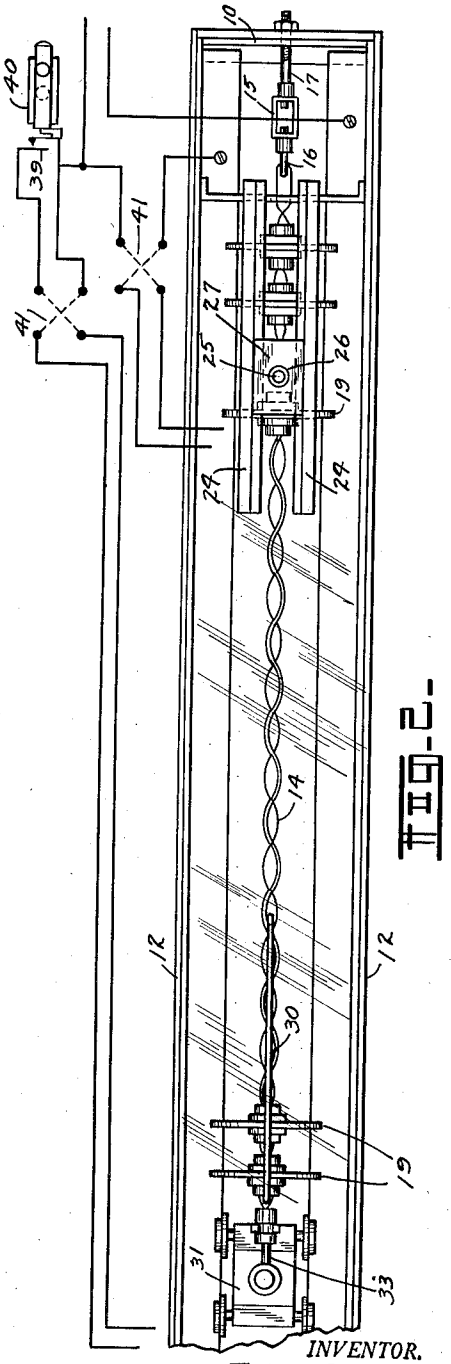


FIG. 2.

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Fig. 3.

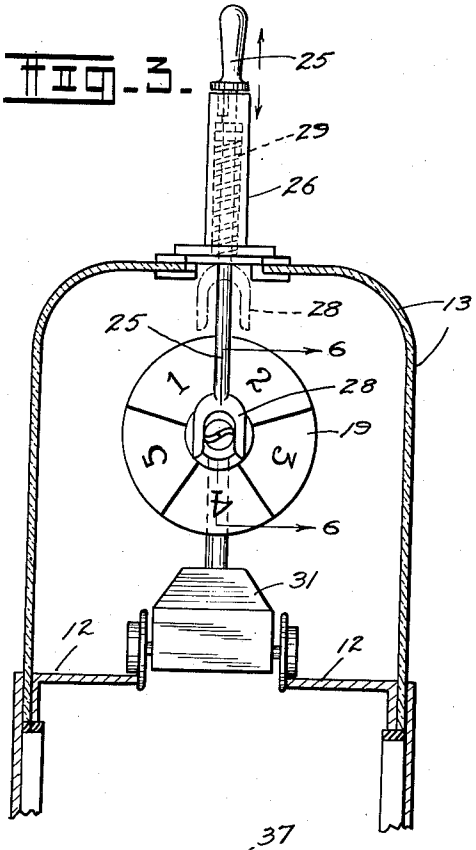
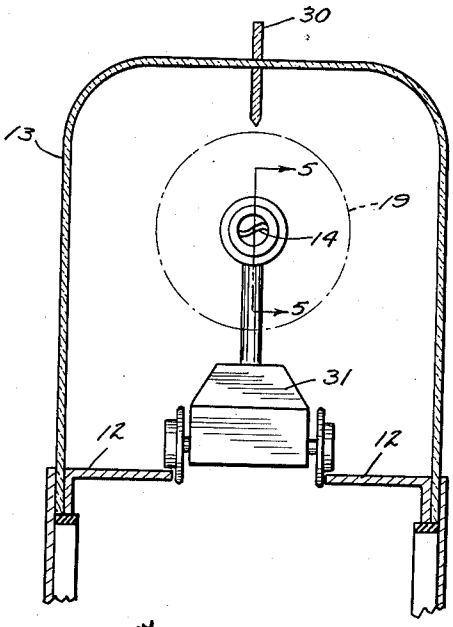


Fig. 4.



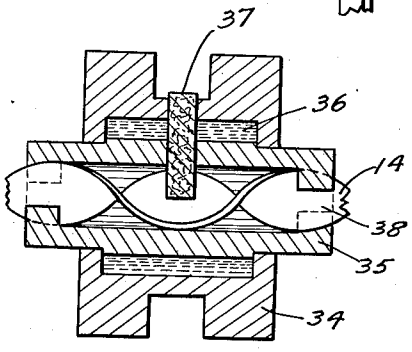


Fig. 5.

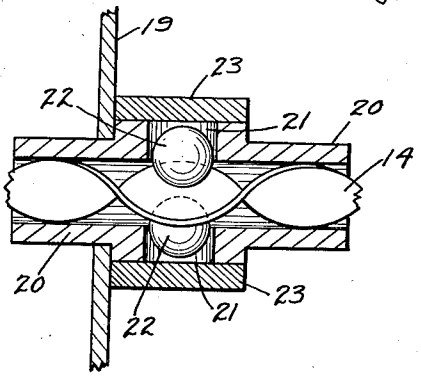


Fig. 6.

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CHANCE DEVICE WITH SPIRAL CARRIER AND DISKS

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2 Claims. (Cl. 273—142)

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This invention relates to a game and more particularly to a game adapted for coin controlled operation and used in such locations as amusement parks and the like.

The principal object of the invention is the provision of a game requiring skill in the operation thereof.

A further object of the invention is the provision of a game including a plurality of discs rotatably mounted on an elongated carrier having means formed for rotating the discs as they move therealong.

A still further object of the invention is the provision of a game including a number of movable game pieces rotatably positioned on a spiral carrier and arranged to utilize spinning motion of the discs as momentum controlling the degree of travel of the discs on the said spiral carrier.

A still further object of the invention is the provision of a rotatable game piece for movement on an elongated carrier and incorporating antifriction bearings spacing the said game piece with respect to the carrier and controlling its relative position with respect thereto.

The game shown and described herein has been designed as a game of skill particularly adapted for play by several persons wherein varying scores may be achieved by the skillful manipulation of a plurality of discs rotatably mounted on a spiral carrier. The game device incorporates manually actuated means for selecting and moving each of the several game pieces on a continuous spiral carrier and automatically actuated means for returning each of the said game pieces to playing position. The game utilizes the spinning motion of each of the several game pieces mounted on an elongated spiral carrier for insuring controlled travel of the discs therealong.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a side elevation of the game device with parts in cross section.

Figure 2 is a top plan view of the game device shown in Figure 1.

Figure 3 is a vertical cross section on an enlarged scale taken on line 3—3 of Figure 1.

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Figure 4 is a vertical cross section on an enlarged scale taken on line 4—4 of Figure 1.

Figure 5 is a vertical cross section on an enlarged scale taken on line 5—5 of Figure 4.

Figure 6 is a vertical cross section taken on line 6—6 of Figure 3.

By referring to the drawings and Figures 1 and 2 in particular it will be seen that an elongated elevated enclosure is disclosed comprising spaced end pieces 10 and 11, a base 12 and a transparent hood-like housing 13. The hook-like housing 13 is in the cross sectional shape of an inverted U and encloses the playing area of the game through the center of which there is positioned longitudinally a spiral carrier 14 supported at each of its ends by suitable tensioning means on the end pieces 10 and 11. As best shown in Figure 1 of the drawings, the means for tensioning the spiral carrier 14 with respect to the end pieces 10 and 11 comprises a turnbuckle 15, a portion 16 of which is affixed directly to one end of the spiral carrier 14 and another portion 17 of which is secured to the end piece 10. The opposite end of the spiral carrier 14 is secured directly to the end piece 11 by a threaded stud and nut assembly 18.

Still referring to Figures 1 and 2 of the drawings it will be seen that a plurality of discs 19 are rotatably mounted on the spiral carrier 14 and adapted for longitudinal travel thereon. Each of the discs 19 has its front and back surfaces divided into a plurality of identified sections such as shown in Figure 3 wherein five such sections are shown and numbered. Each of the discs 19 has a hub 20 enclosing a pair of oppositely disposed, circular passageways 21 and ball bearings 22 are located one in each of the oppositely disposed circular openings 21 so that they extend into the tubular passageway defined by the hub and through which the spiral carrier 14 is positioned. The ball bearings 22 are retained in the circular passageways 21 formed in the hub 20 by a sleeve 23 positioned about the hub 20 and in registry with the circular openings 21.

It will thus be seen that when any one of the discs 19 is moved longitudinally on the spiral carrier 14, it will be caused to rotate by reason of the engagement of the oppositely disposed ball bearings 22 with the spiral carrier 14 and movement initially imparted to the disc 19 will be translated to spinning motion of the disc 19 and stored in the form of momentum to enable the disc 19 to travel a desired distance along the spiral carrier 14. Means for imparting such initial movement to the disc 19 is therefore nec-

essary and is provided on the playing end of the game, the right hand end as shown in Figures 1 and 2 of the drawings.

By reference to Figures 1 and 2 of the drawings it will be seen that a longitudinally slotted top piece 24 is positioned immediately above the spiral carrier 14 and adjacent the end piece 10 of the game and has a playing arm 25 reciprocally mounted in the longitudinally extending slot therein and adapted for reciprocal movement in the slot. The playing arm 25 is positioned in the slot 24 by passing the arm 25 through a vertically formed tubular portion 26 on a bracket 27, the edges of which are grooved to engage the sides of the slotted top piece 24. The construction is illustrated in enlarged detail in Figure 3 and by referring thereto as well as to Figures 1 and 2 it will be seen that the playing arm has a bifurcated lower end portion 28 which is adapted to be positioned immediately adjacent one of the discs 19 and serve as means for imparting longitudinal motion to the disc so as to start the travel along the spiral carrier 14.

Still referring to Figure 3 of the drawings it will be observed that the playing arm 25 is reciprocally mounted in the tubular portion 26 heretofore described and that a coil spring 29 is positioned in the tubular portion 26 normally biasing the playing arm 25 upwardly so that when it is released by the player it will move upwardly and out of the way of the several discs 19 on the spiral carrier 14. It may thus be used to successively impart motion to each of the several discs 19 in order that they may travel along the spiral carrier 14 and arrive at the target area at the other end of the game in accordance with the desire and/or skill of the player. The target area, which is that portion of the game adjacent the end piece 11, has a marker 30 positioned along the top of the hood-like housing 13 and is shown to advantage in Figures 1, 2 and 4 of the drawings.

The objective of the game is to impart such movement to each of the rotatable discs 19 that they move along the spiral carrier and are positioned in the target area thereof beneath the marker 30 with corresponding colors and/or insignia in alignment. For example, if all of the discs 19 on the carrier 14 are so moved that they line up in spaced relation in the target area with all of the nnumbers one immediately adjacent the marker, the highest possible score has been attained. If, for example, only three of the discs so line up that the same numbers are in alignment, a lesser score is realized, etc. Obviously each of the discs 19 may be divided into any number of sections with any identifying means such as colors, symbols or numbers. In Figure 3 of the drawings numbers are shown indicating five areas on each of the discs 19.

It will thus be seen that means has been provided for moving the discs 19 into the target area and it will be obvious that means must be provided for returning the discs to the playing end of the game adjacent the end piece 10 so that subsequent games can be played. Such means is provided in the game and comprises a motor 31 enclosed in a fanciful housing and arranged on wheels or caterpillar tracks 32 formed on the base 12 of the game and adapted to be energized by contact therewith, the tracks 32 being insulated with respect to the game and comprising conductors for suitable electrical circuit. A forwardly and backwardly projecting member 33 is provided on the housing of the motor 31 and provided with a fork 34 on the upper end thereof

adapted for registry with a cylindrical member 35 which in turn incorporates an oil reservoir 36 and a suitable wick 37 and has its end sections 38 formed with slots for registry with the spiral carrier 14 which is passed therethrough. Movement of the motor 31 along the track 32 will therefore move the tubular member 35 along the spiral carrier 14 and, in addition to pushing the several discs 19 to the playing end of the game adjacent the end piece 10, it will clean and oil the spiral carrier 14 thereby maintaining the same in perfect playing condition. Electrical switches and suitable wiring is provided as shown in connection with Figures 1 and 2 of the drawings for controlling the operation of the motor 31. A main control switch 39 is located near the playing end of the device and is subject to actuation by a coin slide 40.

The playing cycle of the game is started when the slide 40 is actuated thereby closing the main switch 39 which in turn energizes the motor 31 and the same travels from left to right as shown in Figures 1 and 2 moving the discs 19 ahead of it into playing position adjacent the playing arm 25. A limit switch 41 is actuated by the motor 31 to reverse the same and the motor 31 therefore travels backwardly along the tracks 32 to a stop 42 located on the end piece 11. At this point the main circuit is broken by a switch 43 thereby stopping the motor 31. The game is then played by manually moving the playing arm 25 downwardly so that the bifurcated end 28 thereof engages each of the discs 19 individually and successively whereby they may be moved into the target area. The game then remains in operation until the coin slide 40 is again actuated to cause the motor 31 to move the discs 19 back into playing position.

It will thus be seen that a novel and attractive game has been disclosed which is particularly adapted for amusement park play. The game is of relatively simple construction and may be easily constructed and will be found in use to be very attractive and to require unusual skill on the part of the player to achieve a high score. The principal novelty in the game is believed to reside in the provision of the spiral carrier 14 and the plurality of rotatable discs 19 mounted for movement therealong and their particular mounting means which enables them to utilize the momentum of their spinning motion to travel to the desired target area.

Having thus described my invention, what I claim is:

1. A game including a pair of spaced end pieces, a base and a transparent covering positioned over said base and enclosing a playing area thereabove, a spiral carrier suspended longitudinally in said game area, a plurality of discs positioned for movement on the said spiral carrier, indicating means on said discs and on said covering, each of the said discs including a hub having oppositely disposed inwardly extending members engaging the said spiral carrier on its opposite sides, a longitudinally slotted member forming a portion of the said covering and a playing arm operatively disposed in said longitudinally slotted member and adapted for engagement with the said discs for imparting longitudinal movement thereto to cause the discs to revolve on said carrier and secondary means for moving the said discs along the said carrier as to return them to a predetermined playing position.

2. A game including a pair of spaced end pieces, a base and a transparent covering positioned over

said base and enclosing a playing area thereabove, a spiral carrier suspended longitudinally in said game area, a plurality of discs positioned for movement on the said spiral carrier, indicating means on said discs and on said covering, each of the said discs including a hub having oppositely disposed inwardly extending members engaging the said spiral carrier on its opposite sides, a playing arm positioned over said base and adapted for engagement with the said discs for imparting longitudinal movement thereto to cause the discs to revolve on said carrier and secondary means for moving the said discs along the said carrier as to return them to a predetermined playing position.

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