Feb. 17, 1925. 1,526,419

S. A. GRUBBS

NOVELTY APPARATUS

Filed July 13, 1921 5 Sheets-Sheet 1

Fig. 1.

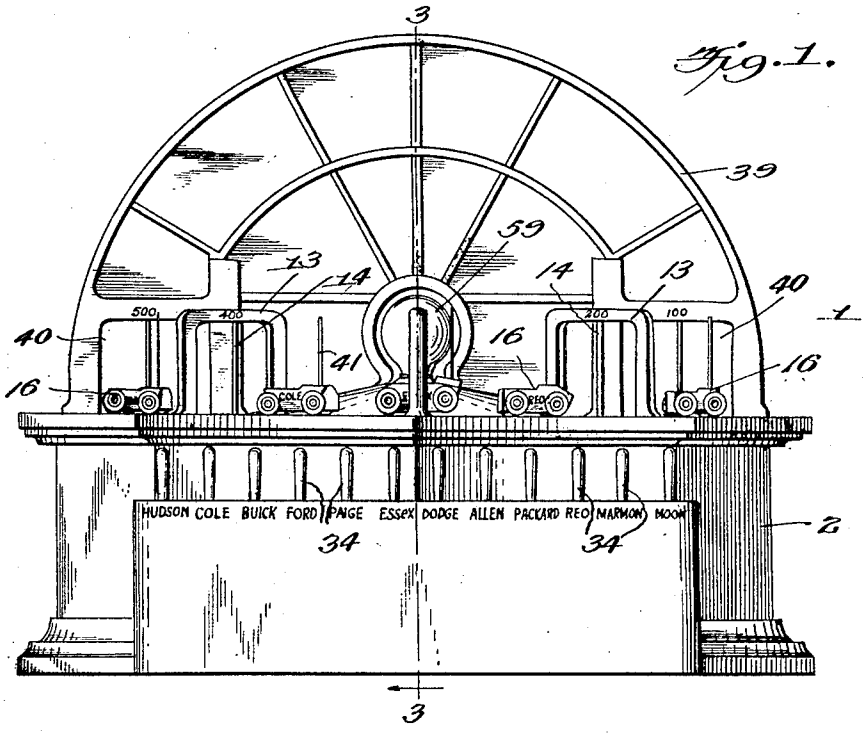
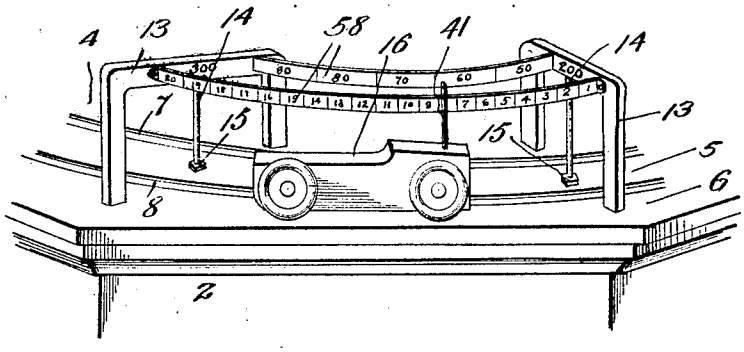


Fig. 2.



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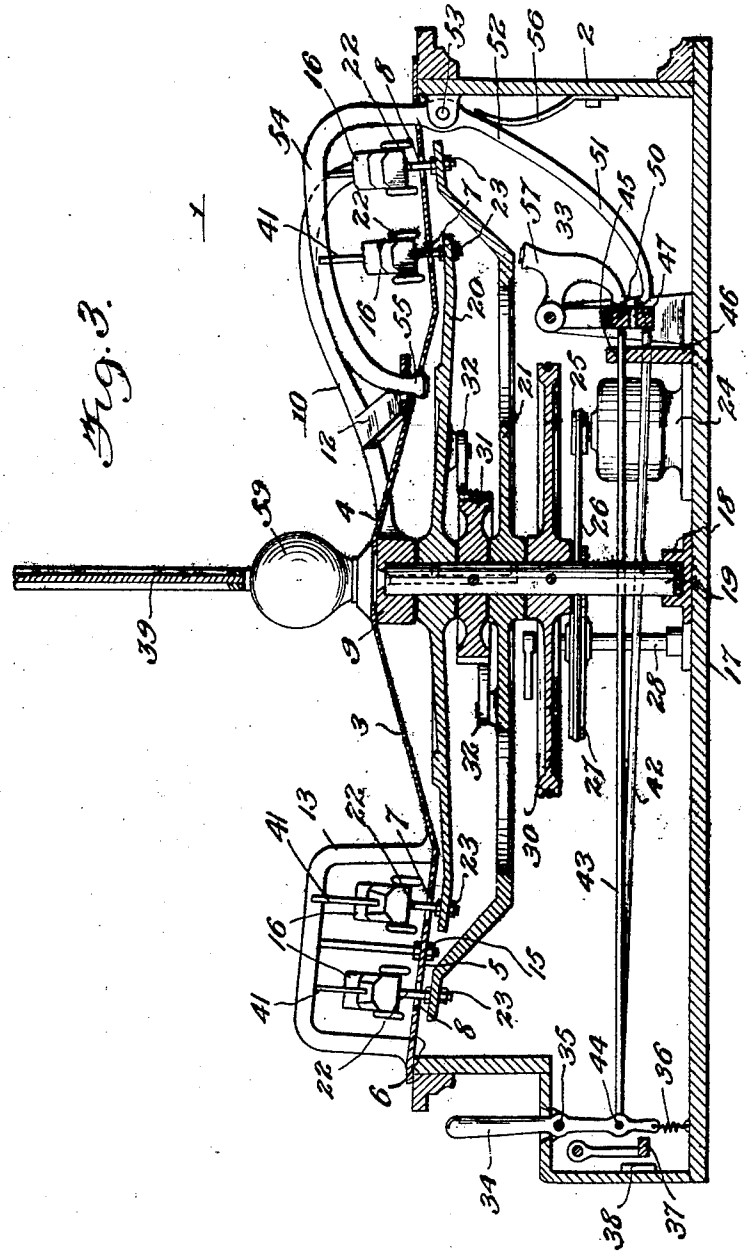
Feb. 17, 1925. 1,526,419

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Filed July 13, 1921 5 Sheets-Sheet 2

Fig. 3.



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S. A. GRUBBS

NOVELTY APPARATUS

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Fig. 4.

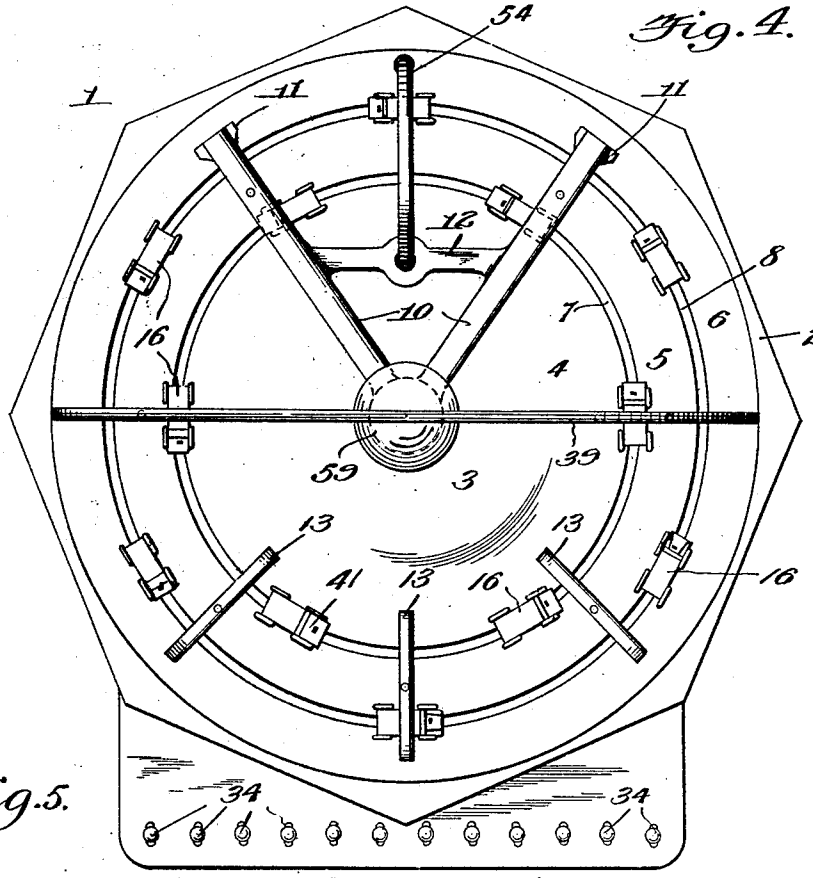
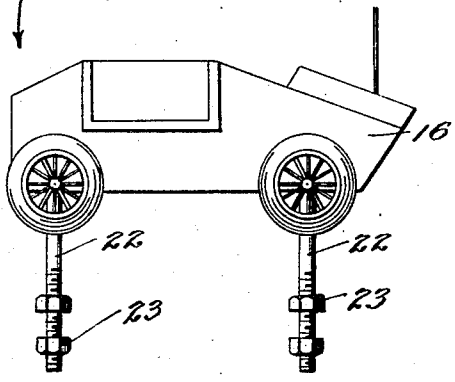


Fig. 5.



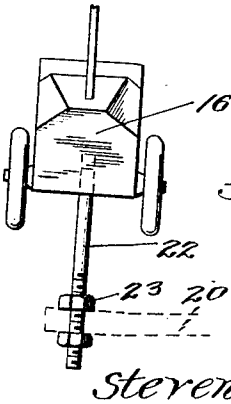


Fig. 6.

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Feb. 17, 1925. 1,526,419

S. A. GRUBBS

NOVELTY APPARATUS

Filed July 13, 1921 5 Sheets-Sheet 1

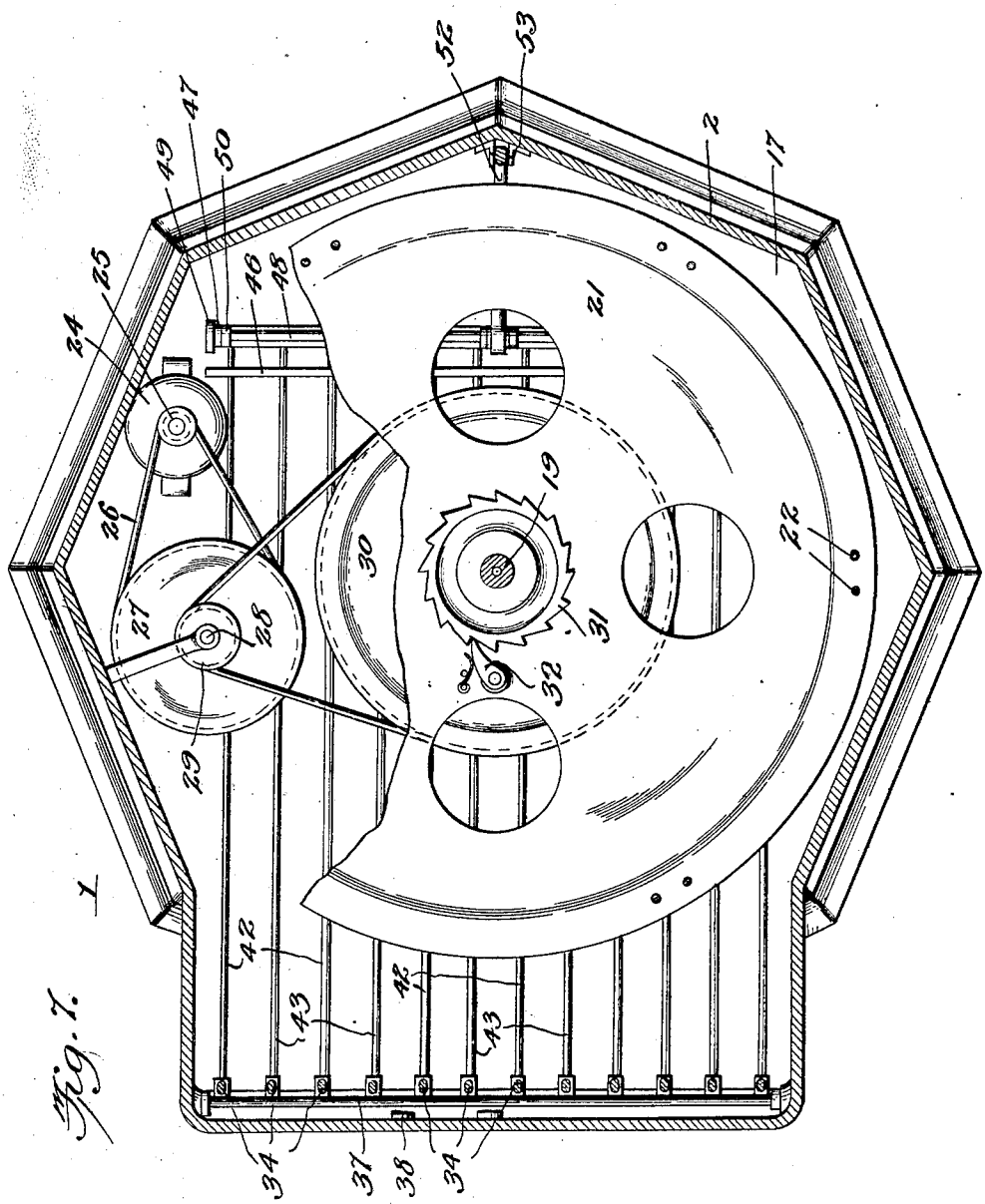


Fig. 1.

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Feb. 17, 1925. 1,526,419

S. A. GRUBBS

NOVELTY APPARATUS

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Fig. 8.

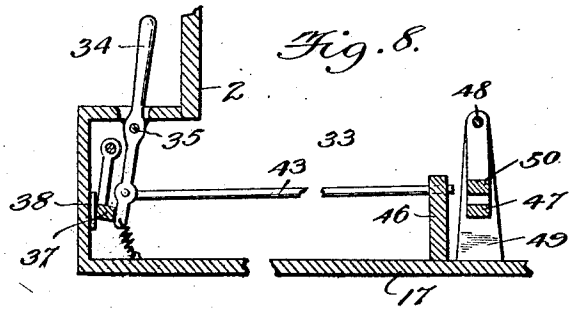


Fig. 9.

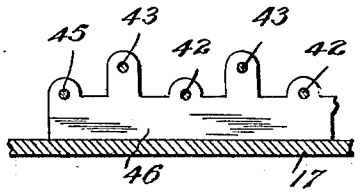


Fig. 10.

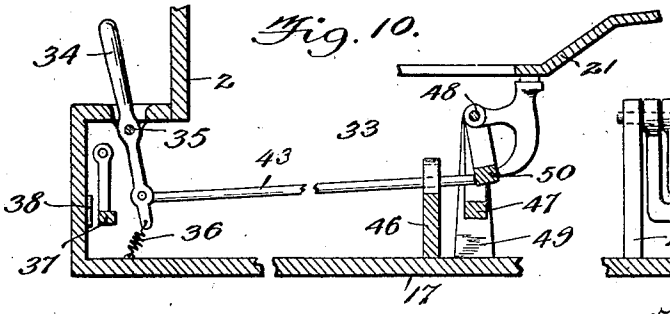
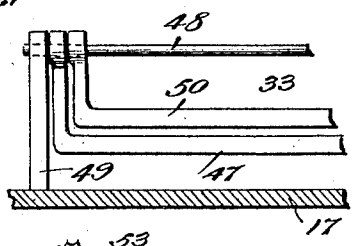


Fig. 11.



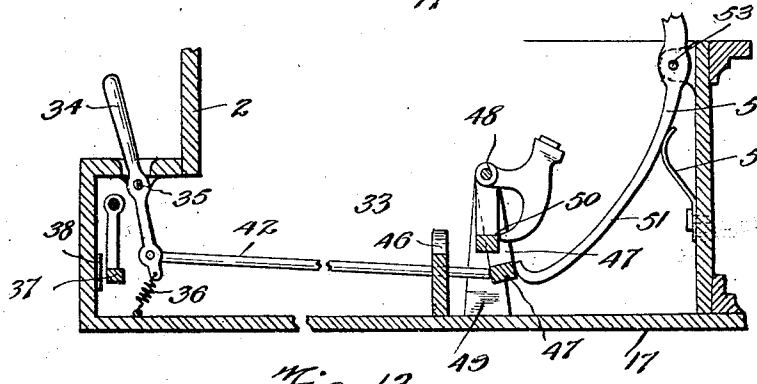
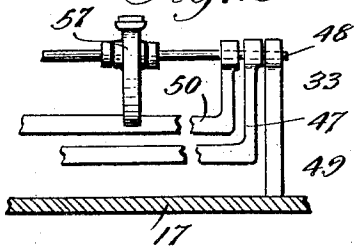


Fig. 12.

Fig. 13.



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Patented Feb. 17, 1925. 1,526,419

UNITED STATES PATENT OFFICE.

STEVEN A. GRUBBS, OF COLUMBUS, OHIO.

NOVELTY APPARATUS.

Application filed July 13, 1921. Serial No. 484,520.

To all whom it may concern:

Be it known that STEVEN A. GRUBBS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, has invented certain new and useful Improvements in Novelty Apparatus, of which the following is a specification.

This invention relates to an improved novelty apparatus designed for use in recreational centers for the purpose of providing amusement and the opportunity to exercise individual skill and supremacy in the actuation of the apparatus.

In carrying out the invention use is made of a novelty apparatus which consists of a suitably formed casing constructed to provide a circular raceway or track, around which suitable counters are adapted to revolve, the said counters being carried by means of axially rotatable supports provided within the casing which are driven from a suitable form of motor, and to provide in conjunction with the casing and manually operated brake structure which upon actuation will engage with said supports to govern rotation on the part of the latter and the consequent control of the counters carried thereby with respect to the raceway, the arrangement of parts being such that when the brake structure is initially operated, the said motor will be energized to effect the rotation of the counter supports, permitting said counters to revolve rapidly about the raceway, and whereby upon subsequent manipulation of the brake structure, the rotation of said supports may be arrested so that by the exercise of skill the said counters may be brought to a stop at desired positions upon the raceway, an arrangement which permits the operator who brings a counter nearest the predetermined goal to successfully conclude the contest.

A further object of the invention resides in forming the raceway to include a plurality of concentrically located annular tracks, each of said tracks being provided with an individual set of counters, to provide a plurality of rotatable supports within the casing for effecting the retention and rotation of the counters from a common motor, and to provide interior and exterior braking arms for the purpose of controlling the rotation of the axial supports.

Other objects of the invention reside in an apparatus of this character which will be capable of furnishing considerable amusement and enjoyment to the operators thereof, to be simple yet efficient in construction so as to overcome the necessity of continuous repairs or other mechanical disorders, and to include a construction whereby the counter supports may continue to rotate by their own momentum after the driving motor has had its operation arrested. The invention is further adapted to be employed as an advertising novelty and to include an improved counting or scoring arrangement in conjunction with the rotatable counters.

With these and other objects in view, as will appear as the description proceeds, the invention accordingly consists in the novel features of construction, combinations of elements and arrangements of parts, hereinafter to be fully described and pointed out in the appended claims.

In the accompanying drawings, forming a part of this specification, and in which similar characters of reference denote like and corresponding parts:

Figure 1 is a front elevation of the improved apparatus comprising the present invention,

Figure 2 is a detail perspective view disclosing fragmentarily the raceway construction and the cooperative scoring apparatus,

Figure 3 is a vertical longitudinal sectional view taken through the apparatus on the plane indicated by the line 3—3 of Figure 1,

Figure 4 is a top plan view of the apparatus,

Figure 5 is a side elevation of one of the counters,

Figure 6 is a front view thereof,

Figure 7 is a horizontal sectional view taken through the apparatus,

Figure 8 is a detail sectional view disclosing the position of the braking structure when initially operated to energize the operating motor,

Figure 9 is a detail sectional view of the bracket utilized in supporting the longitudinal rods of the braking structure,

Figure 10 is a detail vertical section disclosing the position of the braking structure when actuated to force the inner pivoted arm thereof into engagement with one of the rotatable counter supports.

Figure 11 is a fragmentary front elevation disclosing the supports for the pivoted U shaped member utilized in the braking structure and designed for effecting the operation of the pivoted arms of said structure,

Figure 12 is a detail vertical sectional view disclosing the positions of the braking structure when the outwardly extending pivoted arm is operated to assume a braking position, and

Figure 13 is a detail rear elevation disclosing the mounting for the inwardly located pivoted braking arm.

Referring more particularly to the details of the invention, the numeral 1 designates my improved novelty apparatus in its entirety. As shown, the said apparatus includes a casing 2 of suitable proportions and designed to present an ornamental appearance. In this instance the said casing is provided with a top plate 3, which includes an inner section 4, an intermediate section 5 and an outer section 6, the said sections being relatively spaced to provide annular grooves 7 and 8 which serve to constitute a race or trackway. To effect the support of the various sections of the top plate, the inner section is provided beneath the central portion thereof with a bearing 9, from which project rearwardly extending diverging arms 10, the latter being upwardly and outwardly curved and formed to terminate in feet 11, which are adapted to be secured stationarily and securely to the outer portions of the casing 2, the rigidity of said arms being enhanced by providing therebetween a connecting web 12. By this construction it will be apparent that the inner section of the plate or cover of the apparatus may be rigidly mounted in an operative position. The outer section thereof has its circumferential portion suitably secured to the casing 2, and the intermediate portion is adapted to be maintained in a supported and operative position by providing the apparatus with a plurality of arches 13, which are adapted to extend over the grooves 7 and 8 and have their lower ends secured to the inner and outer sections 4 and 6 respectively. These arches carry depending rods 14, which have their lower ends equipped with suitable fastening devices 15 for the purpose of securing the section 5 between the inner and outer sections.

The presence of the grooves 7 and 8 in the cover of the apparatus provides raceways of annular formation with which rotatable counters 16 are adapted to cooperate. In the present instance the counters 16 are of a form to resemble motor driven vehicles, but this form is optional, and it will be apparent that horses or other objects may be substituted in lieu thereof. These counter pieces are adapted to be supported so that the same may rotate about the raceway provided by the cover plate, and the present invention includes means for effecting the rotatable support of the counters and to enable the movements of the latter to be under the control of the operators of the apparatus, in order that the positions of the counters with respect to the raceway may be governed to permit of features of scoring to be hereinafter described. To this end, the base 17 of the casing is provided centrally with a bearing 18, which is situated in vertical alignment with the bearing 9, the said bearing being relatively disposed to receive the upper and lower ends of a vertically situated shaft 19. This shaft is adapted to loosely carry a pair of spaced horizontally disposed rotatable counter supports 20, which in this instance are in the form of disks, the hubs of which being adapted to loosely surround the shaft 19 in order that the said supports may rotate independently of the shaft. The outer circumferential edges of the supports 20 and 21 are located immediately beneath the grooves 7 and 8, the support 20 being situated so as to register with the groove 7, when the support 21 will register with the outer groove 8. As shown, the counters 16 are provided with depending threaded rods 22 adapted to have their lower ends engaged in the respective supports and are held in engagement therewith, which carry securing nuts 23 as clearly shown in Figure 3 of the drawing. By means of this construction the said counters may be rigidly secured to the supports 20 and 21 so as to rotate in unison therewith, the grooves 7 and 8 allowing for the presence of the rods 22.

To effect rotation of the supporting disks 20 and 21, use is made in this instance of an electric motor 24, whose armature shaft carries a belt pulley 25, around which an endless belt 26 is trained. This belt leads to an enlarged pulley 27 located on a suitably supported vertically extending shaft 28. The latter carries a relatively smaller pulley 29, which is situated in horizontal registration with an enlarged belt wheel 30 fixed to the shaft 28. It will be apparent that when the motor 24 is energized, motion will be imparted to the shaft 28 through the belting described, and that by the relative arrangement of the pulleys the movement of the shaft of the motor may be properly stepped down to conform with the required speed necessary to be imparted to the shaft 19.

opening in the web 12 and is normally disposed in spaced relation from the upper surface of the supporting disk 20, a leaf spring 56 or the like being situated to cooperate with the inner end of the lever 52 for the purpose of maintaining the end 51 of said lever in engagement with the bar 50 and the shoe end 55 of said lever out of engagement with respect to the disk 20. Manifestly, however, upon the oscillation of the handles connected with the rods 42, the said lever 52 will be oscillated against the tension of the spring 56, so that the shoe end thereof will be brought into frictional engagement with the upper surface of the disk 20, thus tending to bring the latter to a stop together with the counters carried thereby. By this construction the counters carried by the upper supporting disk may be brought to a stop in a controlled manner by an operator at various securing positions upon the raceway. The outer counters or those carried by the disk 21 have their positions governed by means of the handles connected with the rods 43. These rods are situated, as aforesaid, to oscillate the bar 47. This bar engages with the lower end of a shoe 57 pivotally carried by the rod 48, the upper end of the said shoe being normally disposed in spaced relation from the under surface of the disk 21. However, by reciprocating the rods 43, the said shoe 57 may be raised so as to frictionally engage with the disk 21, thus bringing the latter to a stop in a manner similar to that set forth for operating the support 20.

From the foregoing description, taken in conjunction with the accompanying drawings it will be apparent that the present invention provides a simple apparatus capable of affording pleasure and entertainment for the operators thereof and one wherein the element of personal skill will become apparent by the manipulation of the operating device of the apparatus. The game requires watchfulness on the part of the operators in denoting the positions which their respective counters assume when traveling about the raceway, and then dexterity and skill must be exercised in oscillating the braking handles 34 so that the counters may be brought to a stop at the best scoring positions possible. As shown in Figure 2 the arches 13 may be connected by means of arcuate strips 58, which are also capable of bearing suitable scoring indicia and cooperate with the arches 13 to permit of a more exact scoring arrangement. The wall 39 may be provided with an electric lamp 59, which is capable of being energized to properly illuminate the apparatus. The shaft 19 may be provided with suitable bores to permit of proper lubrication for the revolving disks 20 and 21. It will be apparent that the number of supports and sets of counters may be varied in order that the apparatus may accommodate any desired number of players. It will be apparent that the construction, by reason of its simplicity, will be capable of imparting extended service without requiring undue repairs or adjustments and that the mechanism as a whole will be rendered accessible and convenient to reach should action so require. In view of the foregoing it is believed that the operation, construction and advantages of the invention will be apparent to those skilled in the art, and therefore a more extended explanation has been accordingly omitted.

What is claimed is:

1. In an apparatus of the character described, a casing including a raceway, a rotatable support mounted within said casing, counters fixed to said support and capable of rotating about said raceway, means for imparting motion to said support, and means for governing the rotation of said support including a pivotally mounted lever having the free end thereof normally spaced from said support, a bar pivotally mounted in the casing and engaged with said lever and an oscillatory handle capable upon manual operation of oscillating said bar and thus the lever to force the latter into frictional braking engagement with said support.

2. In a novelty apparatus, a casing including a plurality of raceways, a plurality of supports mounted for rotation within said casing, counters carried by said supports and capable of rotating about said raceways, means for imparting motion to said supports, a scoring structure cooperative with said raceway and counters, inner and outer braking devices and means operating to force the braking devices into frictional contact with said supports to arrest rotation on the part of the latter to control the movements of said counters.

3. In a novelty apparatus, a casing including a raceway, a disk mounted for rotation within said casing, upwardly projecting counters rigidly carried by said disk and capable of traversing said raceway, means for imparting rotation to said disk, and means for governing the rotation of said disk, including a pivotally mounted lever, the outer end of said lever being formed in the shape of an arch capable of permitting said counters to pass thereunder, the extreme outer end of said lever being terminated in spaced relation from said disk, and manually operated means for oscillating said lever to force the latter into frictional engagement with said disk.

4. In a novelty apparatus, a casing, a support mounted for rotation within said casing, spaced counters carried by said support and capable of rotating about a trackway provided in conjunction with said cas-

The shaft 19 in this instance also carries a fixed ratchet wheel 31, which is disposed to be engaged with pivoted spring pressed pawls 32 carried by the supporting disks 20 and 21. The arrangement of the pawls is such that when the shaft 19 is rotated uniform motion will be imparted to the supporting disks. However, upon the cessation of the application of power to the shaft 19, the disks 20 and 21 will be permitted to rotate under their own momentum until the same are brought to a stop by manually controlled devices to be hereinafter set forth. For controlling the rotation of the disks 20 and 21, I employ an improved starting and braking structure, designated broadly by the numeral 33. This structure includes a plurality of manually operated oscillatory handles 34, which are mounted upon horizontal pivots 35 carried by the casing, the lower ends of said handles projecting into the interior of the casing and having connected therewith small springs 36 which operate to maintain the handles in a normal position. Situated immediately to the front of the handles 34, which latter are located in vertical alignment in the front part of the casing, is a pivotally mounted circuit closer 37, the latter being situated between the lower ends of the handles 34, and a pair of stationary contacts 38. The contacts 38 are suitably connected with and form a part of the electric circuit in which the motor 24 is situated. It is obvious that when anyone of the handles 34 is grasped and oscillated in a specified direction, the closer 37 will be oscillated so as to physically engage with the contacts 38, thus completing the motor circuit. The circuit is closed for a suitable period, sufficient to effect more or less rapid rotation on the part of the supporting disks 20 and 21. When this occurs the handles 34 are released and respond to the tension of their springs 36 so as to permit the closer 37 to return to a normal position breaking the motor circuit. The motor is thus de-energized and consequently rotation on the part of the shaft 19 is arrested, however, the disks 20 and 21 may continue to rotate by reason of the pawl and ratchet construction 31 and 32.

The scoring of counting, or other indications which are used to denote the winner of the game, is effected by providing the cover plate 3 with the arches 13, which arches may bear suitable numbers or other equivalent indicia. Also, the upper part of the casing is provided with an upright wall 39 having openings 40 provided in the lower part thereof in registration with the grooves 6 and 7 and with the arches 13, the said plates serving to conceal the rear of the machine when the latter is viewed from the front. The counters 16 carry upwardly projecting resilient strips 41 which are adapted to pass under the arches. It will be evident that upon the operation of the motor 24, the counters 16 will be revolved by reason of a mechanism described, and then, through the instrumentality of the braking structure 33, the movement of the counters is capable of being controlled so that the same may be stopped in a regulated manner near or in registration with the scoring arches 13. These arches bear numbers of varying number, and consequently it is the object of the players of the game to bring their respective counters to a stop nearest the archway bearing the number of the greatest value. It will be plain that by the provision of the wall 39, and by reason of the rapid rotation of the counters, it will be a fairly difficult matter to stop any particular vehicle near the arch of the highest value, since the latter is situated in such manner that the operator must act quickly and skillfully to bring the counter to a stop so that the pointer strip 41 thereof will register with the arch, the player who stops his counter nearest the arch of highest value being declared the winner of the contest.

To effect the stopping of the counters in scoring positions, the brake structure 33 includes a plurality of sets of longitudinally extending rods 42 and 43, the former of which being adapted to control the counters traveling in the groove 7, and the latter to control the counters traveling in the groove 8. The outer ends of the rods 42 and 43 are pivotally connected as at 44 with the lower depending ends of the handles 34, while the other ends of said rods pass through openings 45 provided in a longitudinally extending rigid bracket 46, mounted upon the base of the casing. The inner ends of the rods 42 engage with a pivoted U-shaped bar 47, which is mounted for swinging movement upon a horizontally extending rod 48 carried in rigid bearings 49, the construction being such that upon the oscillation of the handles 34 with which the rods 42 are connected, motion will be imparted to the bar 47. Similarly, the rods 43 engage at their inner ends with a U-shaped bar 50 also pivotally carried by the rod 48, the said bar 50 being adapted for oscillation upon movement on the part of the handles 34 with which the rods 43 are connected. The bar 47 is disposed for engagement with the lower curved end 51 of a pivoted braking lever 52, which latter is pivotally carried as at 53 upon a bearing projecting from one of the inner walls of the casing. The lever 52 then extends upwardly and outwardly through a slot provided in the cover plate 3, and is bent, as shown at 54, to constitute an arch through which the revolving counters are permitted to pass. The effective end of this arch terminates in a downwardly directed shoe 55, which passes through an

ing, a scoring structure including a plurality of spaced counting arches, a motor for rotating said support, and a braking lever for governing the operation of said support, including an exteriorly located portion in the form of an arch capable of permitting said counters to pass thereunder, and manually operated means operable to force said device into frictional engagement with said support, whereby said counters may be stopped at positions contiguous to said arches.

In testimony whereof I affix my signature.

STEVEN A. GRUBBS.