

Aug. 27, 1935.

C. P. O'NEIL

2,012,544

CHANCE GAME DEVICE

Filed June 17, 1933

3 Sheets-Sheet 1

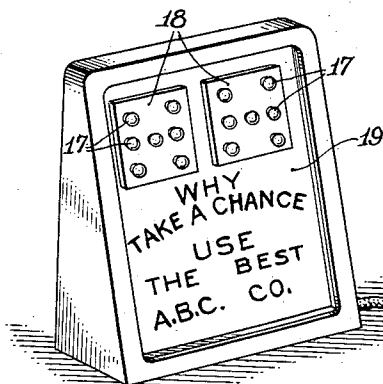


Fig. 1.

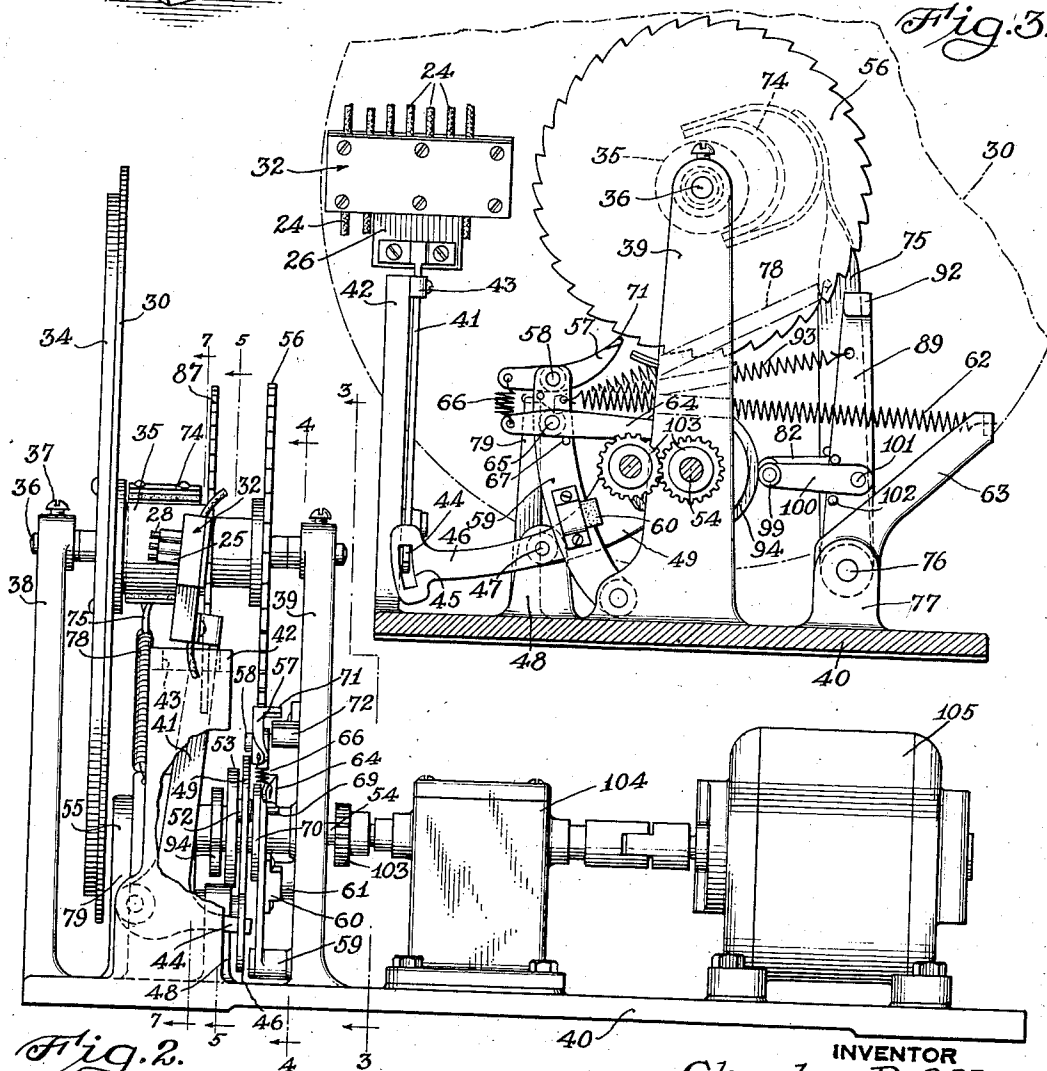
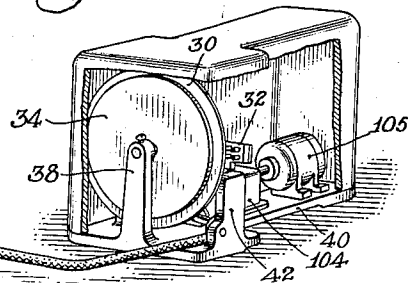


Fig. 2.

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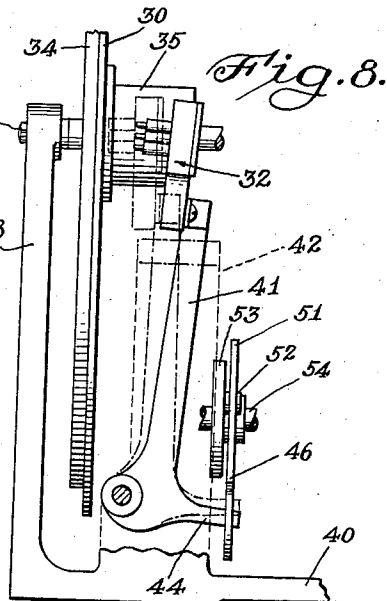
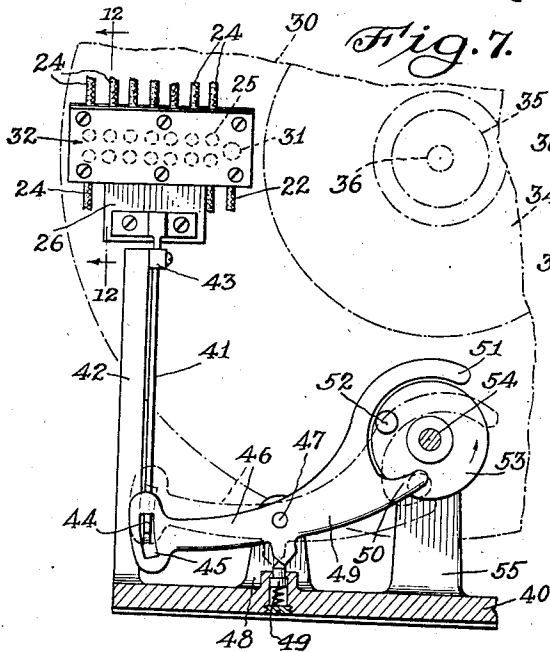
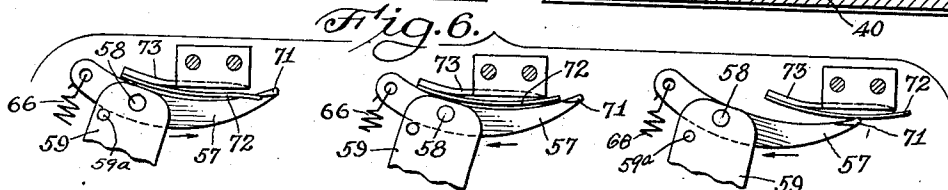
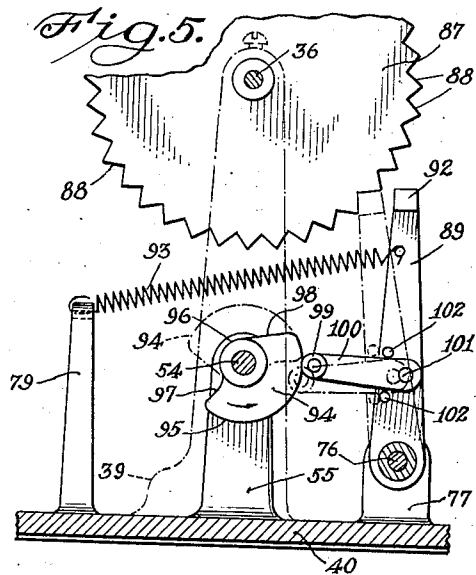
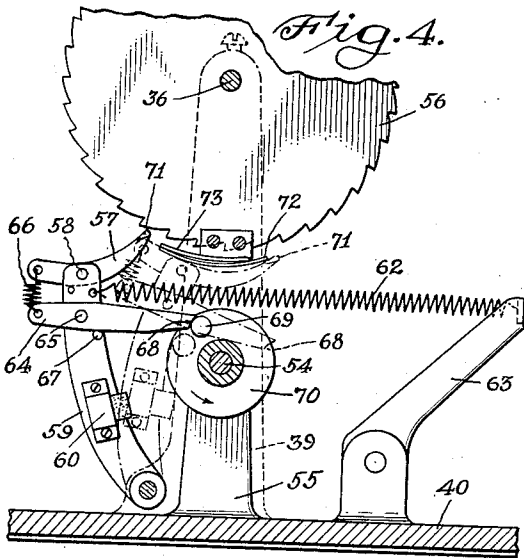
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3 Sheets-Sheet 2



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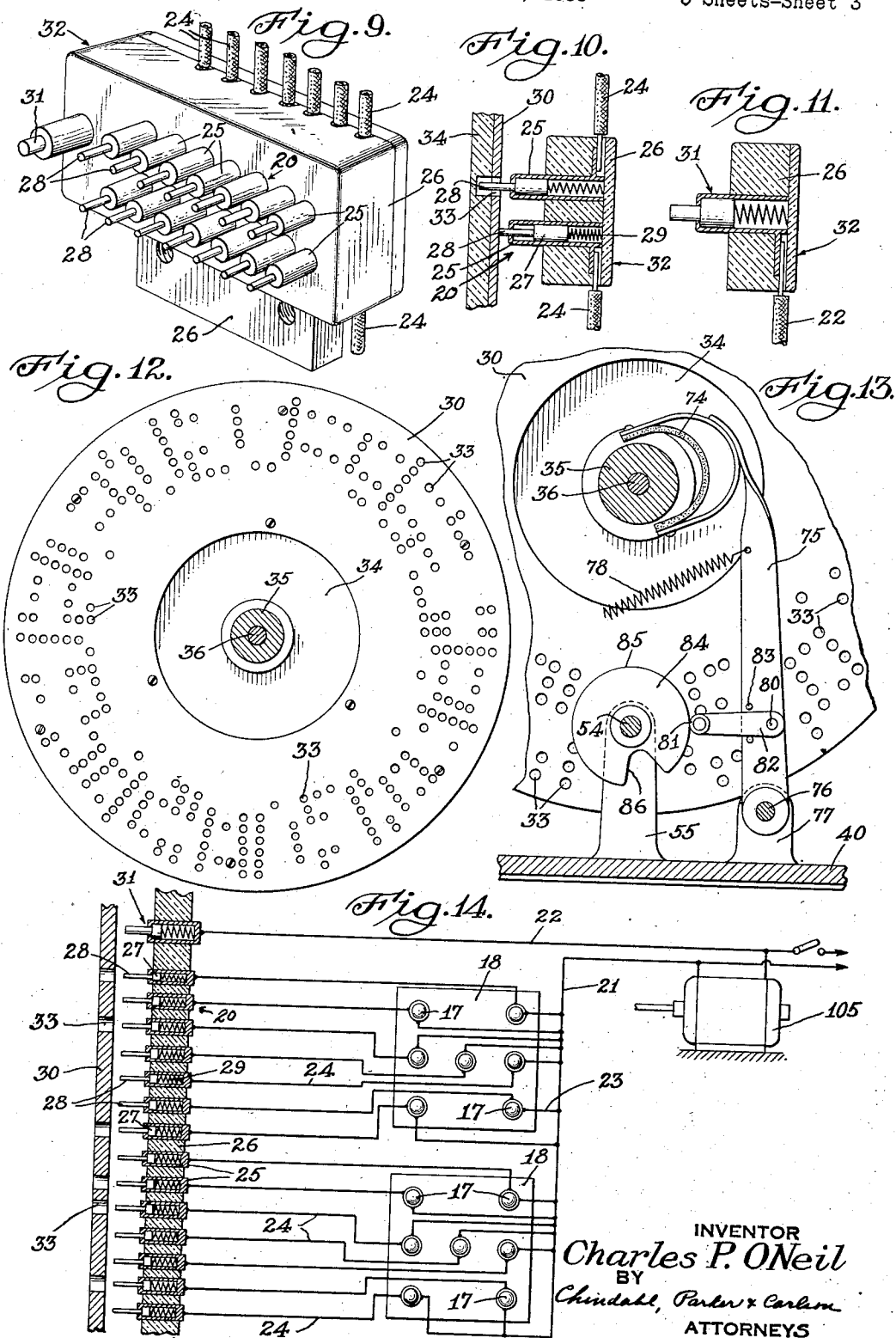
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UNITED STATES PATENT OFFICE

2,012,544

CHANCE GAME DEVICE

Charles P. O'Neil, Chicago, Ill.

Application June 17, 1933, Serial No. 676,259

19 Claims. (Cl. 273—138)

The present invention relates generally to improvements in game devices, and has for its primary object the provision of a new and improved device adapted to present an animated display portraying a game of chance.

Other objects of the invention reside in the provision of a novel chance game device which is particularly suitable for use as an advertising medium, for example in window displays and on signboards.

Still a further object is to provide a game device of the foregoing character which is unique, simple in character, and by reason of the element of chance, capable of attracting and holding the attention of the observer.

Further objects and advantages will become apparent as the description proceeds.

In the accompanying drawings, Fig. 1 is a fragmentary perspective view, partially diagrammatic in character, of a game device embodying the features of my invention.

Fig. 2 is an enlarged side elevational view of the chance control apparatus.

Fig. 3 is a fragmentary sectional view of the control apparatus taken substantially along line 3—3 of Fig. 2.

Fig. 4 is a fragmentary sectional view taken substantially along line 4—4 of Fig. 2 and illustrating a trip mechanism forming part of the apparatus.

Fig. 5 is a fragmentary sectional view taken substantially along line 5—5 of Fig. 2 and illustrating a stop mechanism.

Fig. 6 is a detailed fragmentary sectional view of the trip mechanism.

Fig. 7 is a fragmentary sectional view taken substantially along line 7—7 of Fig. 2, and illustrating a switch operating mechanism.

Fig. 8 is a fragmentary side elevational view of the construction shown in Fig. 7.

Fig. 9 is a perspective view of a selector switch unit.

Fig. 10 is a fragmentary vertical sectional view illustrating the detailed construction and operation of the switch unit.

Fig. 11 is a sectional view of a master switch embodied in the switch unit.

Fig. 12 is a face view in vertical elevation of the selector contact element coacting with the switch unit.

Fig. 13 is a fragmentary view of a brake mechanism for the selector element.

Fig. 14 is a diagrammatic representation of the electric circuits for the game device.

While the invention is susceptible of various modifications and alternative constructions, I have shown in the drawings and will herein describe in detail the preferred embodiment, but it is to be understood that I do not thereby intend to limit the invention to the specific form disclosed, but intend to cover all modifications and alternative constructions falling within the spirit and scope of the invention as expressed in the appended claims.

Referring more particularly to the drawings, the invention in its broad aspects comprises a plurality of individual display characters or symbols mounted in a predetermined arrangement, and any suitable means for rendering the characters selectively visible to the human eye indeterminately in any one of a plurality of combinations or sequences representative of a game of chance. The display characters may be provided in various forms depending on the particular game that it is desired to depict, and further depending on the distance at which they are normally located from the observer. Preferably, the display characters are provided in the form of individual electric lamps 17 (see Figs. 1 and 14) which on being illuminated become selectively distinguishable. Electric lamps have the advantage that they are visible at a substantial distance.

While the invention broadly may be adapted to depict various games of chance, it is particularly suited for and hence is illustrated as portraying a game of dice. To this end, the electric lamps 17 are arranged in two separate groups representing two dice. Preferably, each group of lamps 17 is provided with a visible background 18 representing one face of a die. The lamps 17 represent the dots of the die, and are of such number and so arranged that, upon selective illumination, any number from one to six, corresponding to the six sides of the die, can be made to appear in the proper position. Thus, each group consists of seven lamps 17 which are arranged in the general outline of the letter H, i. e., with six of the lamps arranged in three uniformly vertically spaced pairs of horizontally aligned lamps and two rows of three vertically aligned lamps, and with one lamp located in the center between and in horizontal alignment with the lamps of the intermediate pair. It will be evident that the various combinations of dots from 1 to 6 on the different sides of the die may be represented by illumination respectively of the center lamp, the two lamps of the intermediate pair, either diagonal row of three lamps, the four corner lamps, the

center lamps and the four corner lamps, and the two vertical rows of lamps.

Means for depicting a game of chance, such as the dice game herein described, may be used in numerous instances, particularly in connection with advertising matter, for the purpose of attracting attention, and is especially suited for animated window displays and large commercial signboards. For such uses, the display characters or lamps 17 are adapted to be associated with trade slogans, the names of advertised products and/or the names of advertisers, etc. The element of uncertainty in the display coupled with knowledge of the significance of the play serves to attract widespread and interested attention, and hence greatly enhances the value of the display as an advertising medium.

The lamps 17 may be mounted on any suitable support, such for example as a display board 19.

Means, operable at random, is provided for illuminating an indeterminate number of the lamps 17 for a brief period of time. This means may be operated periodically and preferably automatically to produce a continuous series of plays. In the present instance, it comprises a plurality of individual lighting circuits, each including a switch element 20, for connecting the lamps 17 in parallel across electric mains 21 and 22 leading from a suitable source of current (not shown). Each circuit includes a lead 23 connecting one terminal of the associated lamp 17 to the main 21, and a lead 24 connecting the other lamp terminal to one terminal of the associated switch element 20. The terminals of the switch elements 20 to which the leads 24 are connected preferably comprise respectively a plurality of hollow conducting cylinders 25, closed at the ends, and rigidly mounted in a common movable support 26 of insulating material (see Figs. 9 and 10). A plunger 27 is slidably mounted in each cylinder 25, and has an axial stem 28 which extends outwardly through one end wall of the cylinder and constitutes a switch contact. A coiled compression spring 29 is disposed in each cylinder 25 between the opposite end wall of the latter and the plunger 27, and tends to urge the stem contact 28 outwardly. The opposed contact means for the switch elements 20, in the form herein shown, is common to all, and comprises a single contact member 30 adapted to be moved relatively into engagement with two or more of the stem contacts 28. To complete the circuit, the contact member 30 is adapted during each operation to be connected to the main 22 through a master switch element 31 (see Fig. 11) mounted in the movable support 26, and similar in construction to the switches 20. The switch elements 20 and 31 with the support 26 collectively constitute a multiple switch unit 32.

To effect selective operation of the switch elements 20, the contact member 30 is movable into different positions, and for each position has a number of apertures 33 adapted to receive certain of the movable stem contacts 28 without closing their respective circuits. The remaining contacts 28, upon movement with the support 26 toward the contact member 30, will directly engage against the latter to close the circuits for the associated lamps 17. As each switch contact 28 is engaged, it is moved inwardly against the action of the spring 29. Preferably, the contacts 28 are arranged in two parallel horizontal rows associated respectively with the two groups of lamps 17. Each row consists of seven uniformly spaced contacts 28, and the contacts of

the two rows are staggered laterally. The apertures 33 of each group are also arranged in parallel rows adapted to be moved into operative registration with the rows of contacts 28.

Two dice permit any one of thirty-six possible combinations. In order to make possible the selective illumination of the lamps 17 in similar combinations and arrangements, thirty-six different groups of properly spaced apertures 33 (see Fig. 12) are provided in the contact member 30. The apertures 33 in the rows of the various groups vary in number from one to six. In each of the twelve rows of any given number of apertures 33, the latter are located in relation to the contacts 28 to effect illumination of the lamps 17 in the proper positions on the backgrounds 18. Thus, each row of three apertures 32 will permit illumination of the four corner lamps 17 of one group. It will be evident that the contact member 30 constitutes a selector element for the switches. The switch element 30 is located out of the range of the apertures 33, and hence will serve in each position of the selector element 30 to complete the main circuit.

The selector element 30 may be provided in any suitable form. Preferably, it comprises a flat annular disk of conducting material in which the various groups of apertures 33 are disposed substantially radially and arranged in uniformly peripherally spaced relation. The selector disk 30 (see Figs. 2 and 12) is removably secured coaxially to a supporting disk 34 of insulating material having a hub 35 freely rotatable on a fixed shaft 36. Opposite ends of the shaft 36 are secured, as by means of set screws 37, in the upper ends of two parallel upstanding brackets 38 and 39 fixed on a base plate 40.

To provide means for moving the switch unit 32 toward and from the contact face of the selector disk 30, the support 26 is rigidly mounted on the free upper end of a vertical lever 41. The lower end of the lever 41 is pivotally mounted on an upstanding bracket arm 42 rigid with the base plate 40. Two stops 43 are secured in spaced relation on the upper end of the arm 42 at opposite sides of the lever 41, and serve respectively to limit or define the operative and inoperative positions of the switch unit 32 in relation to the contact disk 30.

Formed on the lower end of the lever 41 is a lateral arm 44 (see Figs. 7 and 8) which extends through an elongated arcuate slot 45 in one end of a lever 46. The arm 44 and the slot 45 provide a lost motion connection between the levers 41 and 46. The lever 46 is pivotally mounted intermediate its ends as indicated at 47 on a bearing bracket 48 rigid with the base plate 40. An over-center spring 49 tends to urge the lever 46 into one position or the other. The other end of the lever 46 has two spaced and oppositely curved cam arms 50 and 51 adapted for engagement by a pin 52 mounted eccentrically on a rotatable disk 53. The disk 53 is fixed on a drive shaft 54 journaled adjacent one end in the bracket 39 and at the other end in a short vertical bearing bracket 55 rigid with the base plate 40.

The cam arm 50 normally extends into the downward path of the pin 52, and upon being engaged and depressed by the latter acts through the levers 46 and 41 to move the switch unit 32 against the action of the spring 49 into operative position. As an incident to this operation, the arm 51, which generally conforms to the curvature of the disk 53, is lowered into the upward path of the pin 52. Subsequently, the pin 52

engages and elevates the cam arm 51, thereby moving the spring 49 over dead center and causing it to return the switch unit 32 into inoperative position. Upon further movement of the pin 51 and until it again engages the cam arm 51, it moves closely along the inner curvature of the arm 51 so that the switch unit 32 is locked positively in inoperative position.

Means is provided for periodically imparting a free indeterminate rotary motion to the selector disk 30 in timed relation to the actuation of the switch unit 32, so that the point or station in which the disk will stop is left entirely to chance. In its preferred form, this means (see Figs. 2, 3, 4 and 6) comprises a ratchet wheel 56 rigidly secured for rotation with the selector disk 30. A pawl 57, adapted to be released under the impulse of stored energy into engagement with the ratchet wheel 56 so as to impart a sudden and substantial rotating force thereto, is pivotally mounted intermediate its ends, as indicated at 58, to the upper end of a substantially vertical lever 59. The lower end of the lever 59 is pivotally anchored to the base of the bracket 39 for swinging movement transversely of the shaft 54. Fixed on the lever 59 is a yieldable stop 60 adapted to engage an opposed stop 61 on the bracket 39 so as to define the end of the working stroke of the pawl 57.

An elongated coiled tension spring 62 is connected at its ends respectively to the upper end of the lever 59, and a fixed arm 63 on the base plate 40, and tends to urge the pawl 57 in the direction of its working stroke. Trip means is provided for moving the pawl 57 in a return stroke, thereby storing energy in the spring 62, and for suddenly releasing the pawl to permit its movement under the action of the spring. This means preferably comprises a detent in the form of a lever 64 pivotally mounted intermediate its ends as at 65 on the lever 59. The heel of the pawl 57 and the outer end of the detent 64 are connected by a coiled tension spring 66 tending to urge the pawl toward the ratchet wheel 56. A stop pin 67 on the lever 59 engages the underside of the detent 64, and serves to define the normal position of the latter. The free inner end of the detent 64 is formed with an abutment face 68 which is disposed in the path of a revolving pin 69 mounted eccentrically on a disk 70 fixed on the shaft 54. Upon rotation of the disk 70 in a counterclockwise direction, as viewed in Fig. 4, the pin 69 engages the face 68 and moves the assembly of the pawl 57, the lever 59 and the detent 64 against the action of the spring 62 into the position shown in full outline, thereby storing energy in the spring and positioning the pawl for engagement with the ratchet wheel 56. The pin 69 rides gradually across the face 68. Ultimately, by reason of the increased inclination of the thrust, the detent 64 snaps upwardly out of engagement with the pin 69, whereupon the spring 62 imparts a sharp kick to the pawl 57. The latter immediately engages the ratchet wheel 56 and causes the latter to spin rapidly.

To provide means for separating the pawl 57 from the ratchet wheel 56 at the end of the working stroke and during the return stroke, so that the rotation of the wheel will be unhampered, the toe of the pawl is formed with a lateral lug 71 which moves into engagement with a hold-out member. In the present instance, this member comprises an elongated leaf spring 72 which is secured at one end to and extends along the underside of a supporting plate 73 mounted on

the bracket arm 39. In the working stroke of the pawl 57, the lug 71 moves above the plate 73. At the end of the stroke, a pin 59^a on the lever 59 forces the pawl 57 downwardly away from the wheel 56 and causes it to snap past the free end of the spring 72. In the return stroke, the lug 71 rides along the underside of the spring 72, and on passing off the spring, permits the spring 56 to return the pawl 57 into operative position.

Means is set into operation after a predetermined period of time, but independently of the actual extent of rotation, to stop the selector disk 30 and to locate it accurately in one of its various positions. This means comprises a braking mechanism, shown in Fig. 13, for first slowing down the rotation of the disk 30, and a stop mechanism, illustrated in Fig. 5, for then definitely arresting the movement of the disk and adjusting the final position thereof to locate one group of apertures 33 in accurately opposed relation to the switch unit 32.

The braking mechanism in its preferred form utilizes the hub 35 on the disk 30 as a brake drum, and comprises a curved friction shoe 74 movable into and out of engagement with one peripheral side of the drum. The shoe 74 is carried by the upper end of a vertical lever 75 which is pivotally mounted at its lower end on a shaft 76 supported in the arm 63 and a lug 77 on the base plate 40. A coiled tension spring 78 is anchored at its ends respectively to the upper end of the lever 75 and a post 79 on the base plate 40, and tends to urge the shoe 74 toward the drum 25. Pivotally secured at one end as at 80 to the lever 75, and carrying a cam follower 81 at the other end, is a transverse lever arm 82. Two stops 83 on the lever 75 are located at opposite sides of the arm 82, and serve to hold the latter substantially in horizontal position. The follower 81 coacts with a rotary cam 84 fixed on the shaft 54. The cam 84 serves to control the application of the brake shoe 74, and to this end has a peripheral cam face 85 of which the major portion is circular and adapted to hold the shoe out of braking position. The circular portion of the cam face 85 is interrupted by a deep notch 86 adapted to receive the follower 81. The notch 86 is located in such angular phase relation to the pin 52 that after the latter has caused the selector disk 30 to be set into motion, the notch will receive the follower 81, thereby permitting the spring 78 to apply the friction brake shoe 74. As a result, the selector disk 30 is slowed down preparatory to being stopped.

Rigidly secured to one end of the hub 35 is an index wheel 87 having a plurality of V-shaped teeth 88 corresponding in number and spacing to the groups of apertures 33. A detent lever 89 is pivotally mounted at one end on the shaft 76. The other end of the lever 89 has a stop 92 movable into engagement between any two teeth 88 on the wheel 87. A coiled tension spring 93 anchored at its ends respectively to the post 79 and the lever 89 tends to urge the latter toward the wheel 87. The position of the lever 89 is controlled by a cam 94 fixed on the shaft 54, and having an arcuate face 95 of substantial radius and a second face 96 of reduced radius. The faces 95 and 96 are connected by an abrupt drop 97 and a riser face 98. Coacting with the cam 94 is a follower 99 on one end of a lever arm 100. The other end of the arm 100 is pivotally secured as at 101 to the lever 89. Two spaced stops 102 on the lever 89 serve to hold the arm 100 substantially perpendicular to the lever. The cam 75

94 bears a phase relation to the pin 69 and the cam 84 such that the stop 92 is withdrawn from the wheel 87 shortly before the pin 69 is disengaged from the detent 64 to institute rotation of the selector disk 30, then is held in inoperative position during such rotation until after the brake shoe 74 has been applied and released, and finally is moved into engagement with the wheel by the spring 93. The stop 92 will engage between any two particular teeth 88 in its path at the time it is released, and through a camming action with one tooth or the other will adjust the disk 30 accurately into position to present one group of the apertures 33 to the switch unit 32.

Any suitable means may be provided for driving the control shaft 54. Preferably, the shaft 54 is driven continuously by power means, and to this end is connected through removable speed change gears 103, and a speed reduction device 104 to an electric motor 105 on the base plate 40.

The operation of the game device will be evident from the foregoing description. Briefly stated, the shaft 54 is rotated continuously. In the course of rotation, the cam face 95 separates the stop 92 from the wheel 87 to release the disk 30 for rotation. The pin 69 actuates the detent 64 to store up energy in the spring 62, and shortly after the stop 92 is withdrawn from the wheel 87, is moved out of the path of the detent to release the pawl 57 in its working stroke so as to impart an unrestrained spin to the selector disk 30. After a predetermined time, the brake shoe 74 is applied to slow down the disk 30 and then is released. Subsequently, the cam drop 97 rides off the follower 99 to return the stop 92 into engagement with the wheel 87 so as to stop and locate the selector disk 30 in one of its various stations. The impositive braking of the disk 30 serves to prevent excessive impact between the wheel 87 and the stop 92, and also aids in rendering the extent of rotation of the disk uncertain. Thereafter, the pin 52 causes the switch unit 32 to be moved into operative relation to the particular group of apertures 33 selected by chance, and after a brief period to be withdrawn into its idle position. The lamps 17 corresponding to the apertures 33 of the selected group are thus flashed to complete one play of the device. In the continued operation of the device, the foregoing cycle is periodically repeated. Since the degree of rotation of the selector disk 30 is not measured or timed, but is left entirely to chance, the same combination or various sequences of combinations may be produced in successive plays.

I claim as my invention:

1. An animated electrical display sign comprising, in combination, a plurality of electric lamps, display means for supporting said lamps in fixed position, said lamps being arranged in two distinct groups, the lamps being of such number and so arranged that upon selective illumination in numbers from one to six of each group they simulate the spots on any one side of a die and of both groups jointly permit of thirty-six possible combinations, and electrical control means automatically operable periodically to select by chance and flash simultaneously the lamps of any one of said combinations, whereby a succession of indeterminate plays are obtained.

2. An animated electrical display sign comprising, in combination, a plurality of electric lamps, display means for supporting said lamps

in fixed position, said lamps being arranged in two distinct groups, the lamps of said groups being adapted to be illuminated in any one of a plurality of combinations differing in the number and relative association of the lamps of both groups, and electrical control means automatically operable at predetermined time intervals in recurrent cycles and during each cycle to select by chance and flash simultaneously the lamps of any one of said combinations, whereby a succession of indeterminate combinations are obtained.

3. A chance game device comprising, in combination, a plurality of electric lamps, means for supporting said lamps in fixed position, said lamps being arranged in two distinct groups representing two dice, the lamps of each group corresponding in number and arrangement to all of the possible locations of spots on the sides of one die, and adapted upon selective illumination in numbers from one to six to simulate any one side of a die, the lamps of both groups jointly permitting of thirty-six possible combinations, and electrical control means operable at random to select by chance and flash simultaneously the lamps of any one of said combinations.

4. A chance game device comprising, in combination, a plurality of electric lamps, means for supporting said lamps in fixed position, said lamps being arranged in a predetermined group and adapted upon selective illumination in numbers from one to six to simulate in number and location the spots on any one side of a die, and electrical control means operable at random to select by chance and flash any one of said numbers of lamps.

5. A chance game device comprising, in combination, a plurality of electric lamps, means for supporting said lamps, said lamps being arranged in two groups, the lamps of each group being adapted upon selective illumination in numbers from one to six to simulate the spots of any one side of a die, the lamps of said two groups jointly permitting of any one of thirty-six combinations, electric circuits including a plurality of parallel switches one for controlling each lamp, and selector means operable at random for closing an indeterminate number of said switches to flash any one of said combinations of lamps including at least one of each group.

6. A game device comprising, in combination, a plurality of electric lamps, means for supporting said lamps in fixed position, said lamps being arranged in two distinct groups representing two dice, the lamps of each group corresponding in number and arrangement to all of the possible locations of spots on the sides of one die, and adapted upon selective illumination in numbers from one to six to simulate any one side of a die, and electrical control means operable to select and flash simultaneously the lamps of any one of said numbers for each of said groups.

7. An animated electrical display sign comprising, in combination, a plurality of electric lamps, means for supporting said lamps, said lamps being adapted for selective illumination in numbers from one to six to simulate the spots of any one side of a die, electric circuits including a plurality of parallel switches one for controlling each lamp, and means for controlling said switches to flash simultaneously any one of said numbers of lamps.

8. A chance game device comprising, in combination, a plurality of electric lamps, means

for supporting said lamps, said lamps being arranged in two groups, the lamps being adapted upon selective illumination in numbers from one to six for each group to simulate the spots of any one side of a die and for both groups to permit of thirty-six possible combinations, electric circuits including a plurality of parallel switch contacts one for controlling each lamp, a rotary contact disk having thirty-six different positions and having a plurality of sets of contact areas one set for each position adapted to coact respectively with said first mentioned contacts controlling said combinations, means for imparting an unrestrained and indeterminate rotation to said disk, means for temporarily braking said disk to slow down the rotation thereof, means subsequently operable to stop said disk and to locate said disk in one of said positions, and means for then effecting relative movement of said contacts and said disk into and out of coacting relation to flash the combination of lamps selected by chance in the random rotation of said disk.

9. A chance game device comprising, in combination, a plurality of electric lamps, means for supporting said lamps, said lamps being arranged in two groups, the lamps being adapted upon selective illumination in numbers from one to six for each group to simulate the spots of any one side of a die and for both groups to permit of thirty-six possible combinations, electric circuits including a plurality of parallel switch contacts one for controlling each lamp, a movable selector contact element having thirty-six different positions and having a plurality of sets of contact areas one set for each position adapted to coact respectively with said first mentioned contacts controlling said combinations, means for imparting an indeterminate movement to said element, means subsequently operable to stop said element and to locate said element in one of said positions, and means for then effecting relative movement of said contacts and said element into and out of coacting relation to flash the combination of lamps selected by chance in the random movement of said element.

10. A chance game device comprising, in combination, a plurality of electric lamps, means for supporting said lamps, said lamps being adapted upon selective illumination in numbers from one to six to simulate the spots of any one side of a die, electric circuits including a plurality of parallel switch contacts one for controlling each lamp, a movable selector contact element having a plurality of different idle positions and having a plurality of sets of contact areas one set for each of said positions adapted to coact respectively with said first mentioned contacts for said various numbers of lamps, means for imparting an indeterminate movement to said element, means subsequently operable to stop said element in one of said positions, and means for then effecting relative movement of said contacts and said element into and out of coacting relation to flash the lamps selected by chance in the random movement of said element.

11. A chance game device comprising, in combination, a plurality of symbols, means for supporting said symbols in fixed position, said symbols being arranged in two predetermined groups representing two dice, said symbols of each group being adapted upon selective display in various combinations to simulate in number and location the spots on any one side of one die, and means automatically operable repeatedly at

random to select by chance and display any one of a plurality of combinations of said symbols, each combination including from one to six symbols of each group.

12. A chance game device comprising, in combination, a plurality of symbols, means for supporting said symbols in fixed position, said symbols being arranged in a predetermined group and adapted upon selective display to simulate in number and location the spots on any one side of a die, and means automatically operable periodically to select at random and display a succession of combinations, each indeterminate as to number from one to six, of said symbols.

13. A chance game device comprising, in combination, a plurality of symbols, means for supporting said symbols in fixed position, said symbols being arranged in a predetermined group and adapted upon selective display to simulate in number and location the spots on any one side of a die, and means operable at random to select by chance and display simultaneously an indeterminate number, from one to six, of said symbols.

14. A chance game device comprising, in combination, a plurality of symbols, means for supporting said symbols in a predetermined arrangement, and selector means automatically periodically actuated for operation at random to display a succession of indeterminate combinations of said symbols, the relative location of the symbols of each combination being determined by the number of symbols displayed.

15. A chance game device comprising, in combination, a plurality of symbols, means for supporting said symbols in a predetermined fixed arrangement, and selector means automatically operable in recurrent cycles to display said symbols in a succession of indeterminate combinations, the number of symbols included in each combination being determined by chance.

16. A chance game device comprising, in combination, a plurality of symbols supported in fixed position and arranged in distinct groups of more than one symbol each, and selector means operable at random to select by chance and display said symbols in any one of a plurality of combinations indeterminate as to the order, number and association of the symbols of each group.

17. A chance game device comprising, in combination, a plurality of electrically controlled symbols, means for supporting said symbols in a predetermined fixed arrangement, electrical means including a selector movable into different positions to effect the display of said symbols in different combinations, means for imparting an uncontrolled and indeterminate movement to said selector, and means automatically operable after a predetermined time interval to stop said selector, whereby the chance display of one combination of symbols is effected.

18. A chance game device comprising, in combination, a plurality of electrically controlled symbols, means for supporting said symbols in a predetermined fixed arrangement, electrical means including a selector movable into different positions to effect the display of said symbols in different combinations, power operable means for imparting an uncontrolled and indeterminate movement to said selector, means subsequently operable to brake the movement of said selector and means automatically operable after a predetermined time to stop said selector

by chance in one position to effect the display of one combination of symbols.

19. A chance game device comprising, in combination, a plurality of electrically controlled symbols, means for supporting said symbols in a predetermined fixed arrangement, electrical means including a rotary commutator disk movable into different positions to effect the display of said symbols in different selective com-

binations, an automatic power means recurrently operable to impart an indeterminate rotation to said commutator disk through at least one revolution, after a predetermined time period to brake the rotation of said disk and after a second predetermined time period to stop said disk by chance to effect the display of one combination of symbols.

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