

Sept. 28, 1965

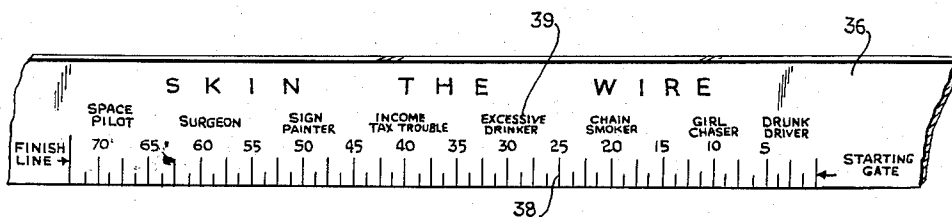
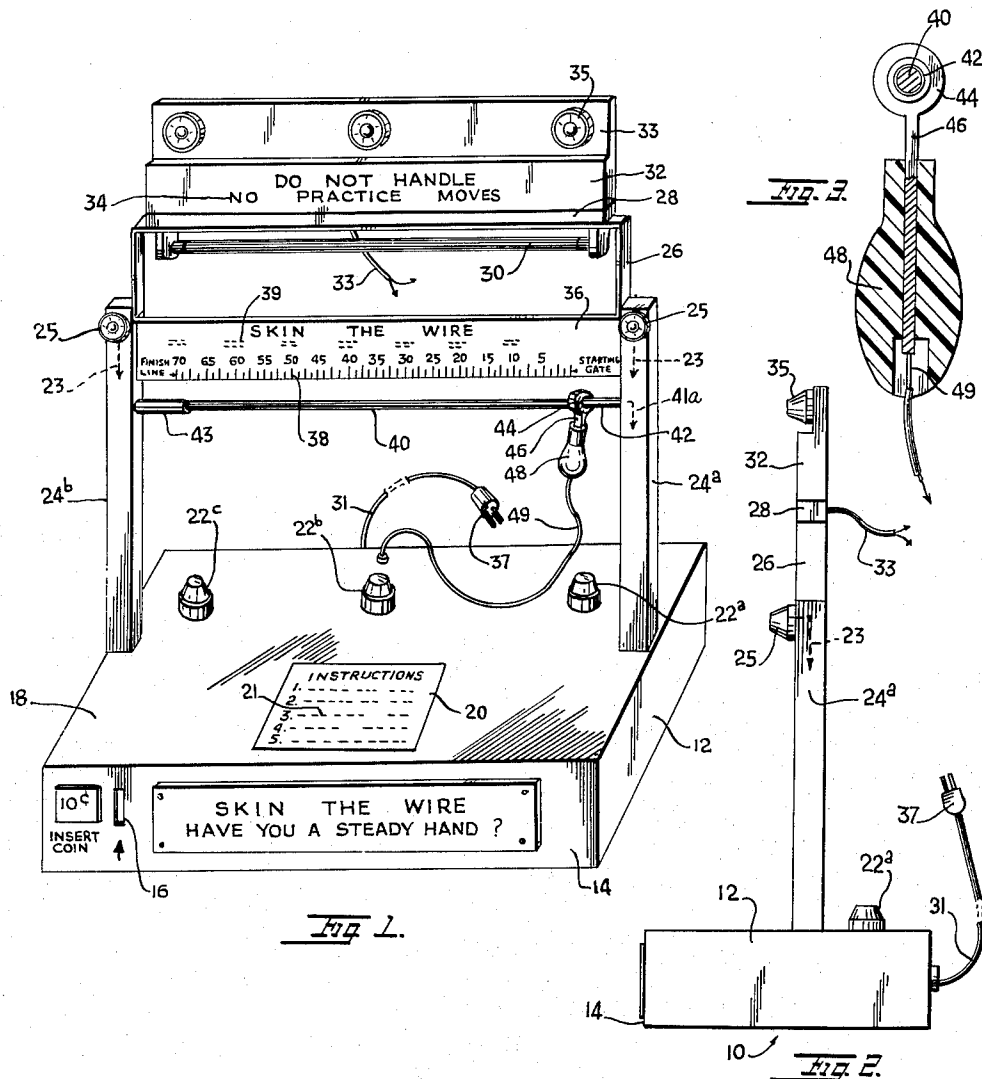
J. K. KAVAKOS

3,208,747

ELECTRICALLY OPERATED GAME DEVICE

Filed May 9, 1963

2 Sheets-Sheet 1



INVENTOR
JOHN K. KAVAKOS
BY
Black & Faulstich
ATTORNEYS

Sept. 28, 1965

J. K. KAVAKOS

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2 Sheets-Sheet 2

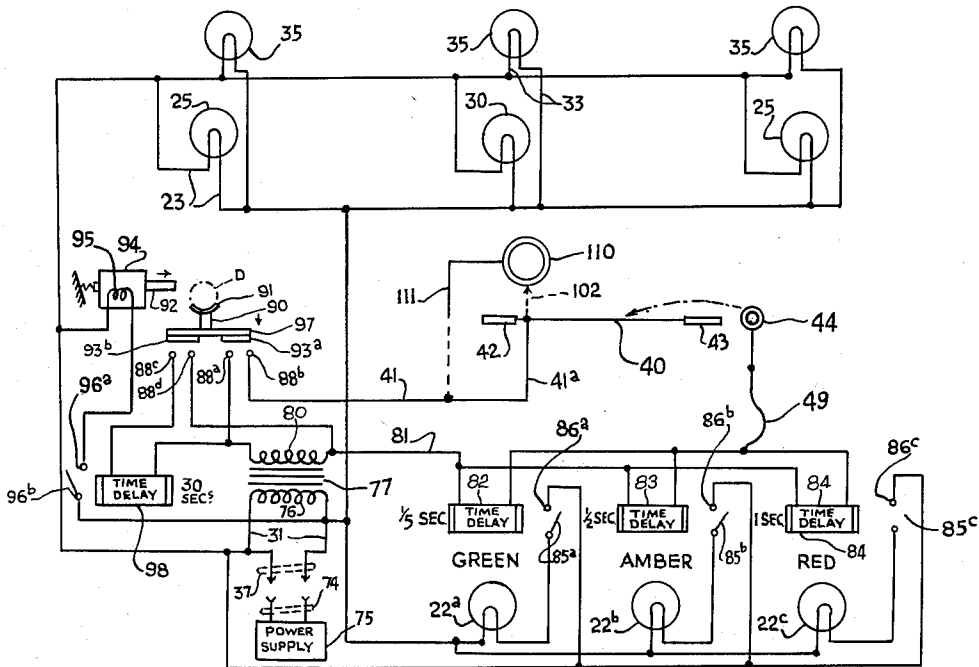


Fig. 5.

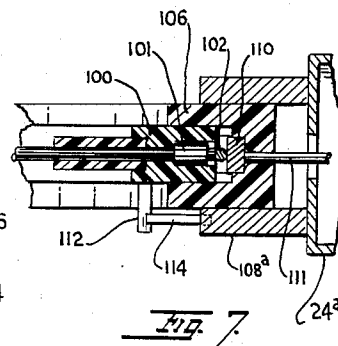
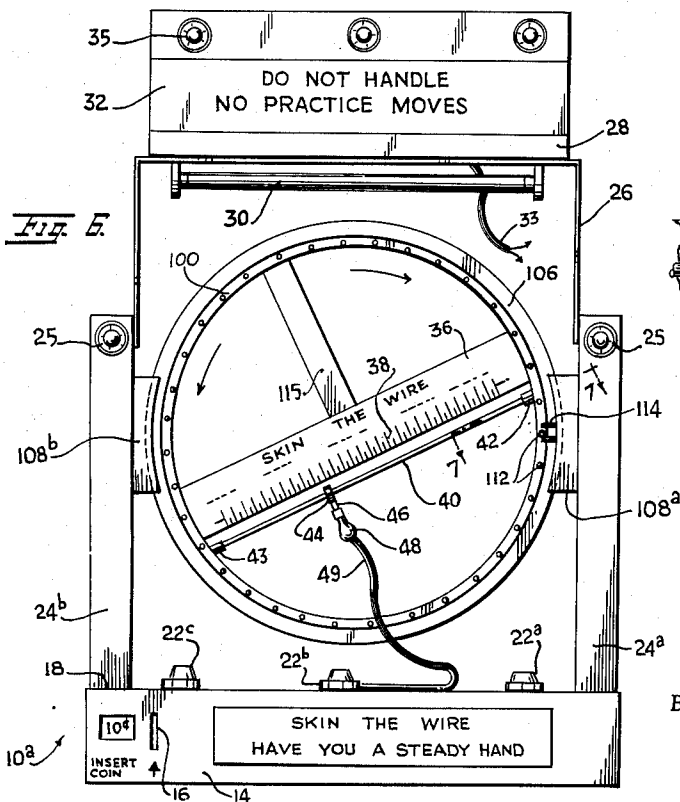


Fig. 7.

INVENTOR.
JOHN K. KAVAKOS
BY *Polach & Paulsen*
ATTORNEYS

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ELECTRICALLY OPERATED GAME DEVICE

John K. Kavakos, 532 Flatbush Ave., Brooklyn, N.Y.

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3 Claims. (Cl. 273-1)

This invention concerns a loop moving game of skill.

The invention is directed at a game device in which the steadiness of hand of a player is tested. The device requires coordination of movements of the hand with judgment of small distances by eye.

According to the invention there is provided a game device which includes an exposed wire to which one terminal of a low electrical voltage is applied. A player moves a conductive ring or loop axially of the wire. The ring or loop is connected in circuit with the electrical voltage so that the circuit is completed if the loop touches the wire. The object of the game is to move the loop along the wire without touching it. If the player permits the loop to touch the wire one or more lamps on the device will light up. The device is arranged so that it requires insertion of a coin to activate the circuit. A scale associated with the wire provides a measure or indication of the steadiness of hand and eye of the player.

It is therefore one object of the invention to provide a game device in which a straight wire is connected in circuit with an electric power supply, lamps and a conductive loop, the loop being movable along the wire to cause the lamps to light up if the loop contacts the wire.

Another object is to provide a game device as described wherein the device requires the insertion of a coin to activate the circuit.

Another object is to provide a game device as described wherein time delay relays are provided in the circuit to effect lighting of the lamps only after the loop contacts the wire for predetermined lengths of time.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming material part of this disclosure:

FIG. 1 is a perspective view of a game device embodying the invention.

FIG. 2 is an end elevational view of the device.

FIG. 3 is a sectional view on an enlarged scale of an operating handle, conductive loop and wire.

FIG. 4 is a fragmentary front oblique view of a scale employed in the device.

FIG. 5 is a diagram of an electrical circuit of the device.

FIG. 6 is a front elevational view of another game device embodying the invention.

FIG. 7 is a sectional view on an enlarged scale taken on line 7-7 of FIG. 6.

Referring to the drawings, there is shown in FIGS. 1 and 2 the game device 10, including a hollow rectangular base or cabinet 12. On the front panel or wall 14 of the base is a slot 16 into which a coin can be inserted for activating the device. On the flat top 18 of the base is an instruction sheet or chart 20 on which is printed instructions 21 for playing the game. Three signal lamps 22^a, 22^b and 22^c are mounted in spaced positions on the top of the base. Two hollow posts 24^a, 24^b extend upwardly from opposite sides of the base. On the front sides of the posts near their upper ends are lamps 25 connected by wires 23 to an electric circuit in base 12. A bracket 26 extends upwardly from and is supported by the posts. This bracket carries an elongated fixture 28 for a tubular incandescent or fluorescent lamp 30. Above fixture 28 is a hollow stand 32 on which are cer-

tain playing instructions 34. A plurality of lamps 35 are carried near the top of the stand. The lamps 25, 30 and 35 are connected by wires 33 to an electric power supply and serve to illuminate a flat vertical panel 36.

Power supply cable 31 terminates in plug 37.

Panel 36 has a graduated scale 38 shown to best advantage in FIG. 4. The scale 38 serves to indicate scores obtained by players in playing the game. Various legends 39 can be provided in association with the scale to amuse players and heighten interest in the game.

Below the panel 36 and parallel to the scale is a bare wire 40. This wire extends through hollow cylindrical insulators 42, 43 at opposite ends. One end of the wire is connected to wire 41 which extends down through post 24^a and terminates at an electrical circuit in base 12. The circuit will be described in connection with FIG. 5. On the stretched wire 40 hangs an electrically conductive metal loop 44. This loop, as best shown in FIGS. 1 and 3, is connected to a shank 46 which extends through insulated handle 48. The outer end of the shank is connected to a flexible wire 49 which terminates at the circuit in the base 12. The inside of the loop has an internal diameter slightly larger than the diameter of wire 40.

FIG. 5 shows the electric circuit including lamps 25, 30 and 35 all connected in parallel with each other via wires 23, 33 to terminals of power plug 37. This plug can be inserted into a socket 74 of a suitable electric power supply 75. The primary winding 76 of a stepdown transformer 77 is connected to plug 37. The low voltage secondary winding 80 is connected via wire 81 to one terminal of each of three parallel connected time delay relays 82, 83, 84. Relay 82 has normally open contacts 85^a, 86^a connected in series with lamp 22^a and terminals of plug 37. Relay 83 has normally open contacts 85^b, 86^b connected in series with lamp 22^b and the terminals of plug 37. Relay 84 has normally open contacts 85^c, 86^c connected in series with lamp 22^c and the terminals of plug 37. Each of lamps 22^a-22^c has a different color, preferably green, amber and red, respectively.

Wire 40 is connected via wire 41^a, 41 in series with normally open contacts 88^a, 88^b of a push-button switch 90. The button 91 of the switch is located so as to receive and support a coin such as a dime D which may be deposited in the slot 16 of the base 12. Adjacent to button 91 is a plunger 92 of a solenoid 94. The solenoid coil 95 is connected in series with normally open contacts 96^a, 96^b of a time delay relay 98. The coil of relay 98 is connected in series with secondary winding 80 and switch contacts 88^c, 88^d. Switch 90 has two shorting bars 93^a, 93^b for contacts 88^a, 88^b and 88^c, 88^d, carried by insulated bar 97. Loop 44 is in circuit with wire 49 which is common to all coils of relays 82-84.

It will be apparent that the relay 98 is deactivated and contacts 96^a, 96^b are open when no coin is resting on and depressing the button 91 of switch 90. Lamps 22^a-22^c are normally extinguished because the relay contacts are all open. Suppose now that conductive loop 44 is moved along wire 40 which extends axially through the loop. If loop 44 moves through the entire length of the wire from insulator 42 to insulator 43 without touching the wire 40, lamps 22^a-22^c will remain unlit. Suppose loop 44 momentarily touches wire 40 for amount 1/5 of a second; at the end of this time, time delay relay contacts 85^a, 86^a will close and lamp 22^a will light up. If the player then moves the loop 44 laterally away from the wire, lamp 22^a will go out. If the player should not be skillful enough and permit the loop 44 to touch the wire 40 continuously for about 1/2 second, both lamps 22^a and 22^b will light up. Both lamps will be extinguished if the player breaks the loop-wire contact by centering the wire in the loop.

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If the player permits the loop 44 to touch the wire 40 for one second or more then all three lamps will light up and the player will have made a score indicated by the position of the loop at scale 38. Lamps 22^a and 22^b provide warning lights and lamp 22^c provides the scoring light.

The player can repeatedly move the loop 44 back to the starting position at insulator 42 and repeat the wire "skinning" action of the game. After a predetermined time, such as thirty seconds, the time delay relay 98 will operate and cause contacts 96^a, 96^b to close, whereupon the plunger 92 will be actuated and will push the coin D off of switch button 91 into a collection box in the base 12. Switch 90 will then open. This will remove voltage from wire 40 as contacts 88^a-88^d open. When another coin is deposited in slot 16, pushbutton switch 90 will again be operated to permit voltage to be applied to the wire 40. Wire 40 has a low voltage applied to it of not more than six volts, so that the player will not be injured should he accidentally touch the wire.

The device embodies a game of skill in which a player can move the loop 44 the entire length of wire 40 repeatedly without touching the wire.

It will provide amusement to both players and spectators. The game device can be installed at carnivals, amusement parks, fairs and other places where persons congregate for fun and recreation. It is possible to keep the circuit C activated permanently by keeping push-button switch 90 closed. This can be done by a weight or any other suitable means which will depress button 91 to close contacts 88^a, 88^b and 88^c, 88^d. The device can then be operated without requiring deposit of a coin in slot 16. This arrangement may be desired if an attendant is present to collect coins from players and to supervise use of the device and playing of the game.

FIGS. 6 and 7 show another game device 10^a which is similar to game device 10, and corresponding parts are identically numbered. Game device 10^a has an insulated circular ring 100. Wire 40 is stretched chordally across the ring and terminates at a head or plug 101 having a metal contact spring finger 102. The plug is embedded in insulated ring 100 and finger 102 extends radially out of ring 100. Ring 100 is rotatably supported in a groove of a stationary insulated channel ring 106. Channel ring 106 is supported by two diametrically opposed brackets 108^a, 108^b on posts 24^a, 24^b. Spring finger 102 contacts a stationary metal contact ring 110 mounted inside the channel ring 106. As the ring 100 is moved into different positions circumferentially of channel ring 106, finger 102 always provides electrical continuity between wire 40 and wire 41 via ring 110 connected by wire 111 to wire 41, as indicated in FIG. 5. Wire section 41^a will be omitted. Loop 44 can be moved along wire 40 in device 10^a in the same manner as in device 10. By grasping radial arm 115 in ring 100 the wire 40 can be rotated along with panel 36 which is also supported in ring 100 so that the player can select any orientation of the wire 40 which he desires for playing the game. The wire 40 can be horizontal, vertical or in any oblique position. Circumferentially spaced pins 112 can be provided on ring 100 to extend outwardly for selectively engaging spring fingers 114 carried by bracket 108^a to hold the ring, wire and scale assembly stationary in any selected position for playing the game.

Game device 10^a makes it possible to increase interest in the game, since a player who may become skilled in moving the loop horizontally without touching the wire 40 may have difficulty in moving the loop along wire 40 when it is vertical or in an oblique position as indicated in FIG. 6.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims,

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Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A game device, comprising a base, a pair of upright supports on said base, a bare wire extending across said base between said supports, a conductive loop encircling said wire and having an internal diameter larger than said wire, lamps carried by said supports for illuminating said base, wire and loop, an electric power supply, signal lamps on said base, circuit means electrically connecting said signal lamps, wire, loop and power supply, said loop adapted to be moved axially along said wire and the signal lamps remain unlit, and the signal lamps adapted to be lit up consecutively when said loop is moved laterally to contact the wire, a panel extending across said base between said supports, a graduated scale on said panel coextensive with said wire for indicating a player's score at any point where the loop contacts the wire while a signal lamp lights up, a coin-actuated push-button switch in circuit with said circuit means for applying voltage to said wire when a coin depresses said switch, a solenoid having a plunger disposed to displace said coin from the switch, and a time delay relay in circuit with said switch and solenoid to activate the solenoid after a predetermined time for displacing the coin from the switch, opening the switch and cutting off voltage from said wire, said circuit means including a plurality of parallel connected time delay relays connected in circuit with said signal lamps respectively for lighting the signal lamps when said loop contacts the wire for certain predetermined times corresponding to the inherent time delay of each of said plurality of relays.

2. A game device comprising a base, a pair of upright supports on said base, a ring rotatably carried by said supports, a bare wire extending across said ring and carried around by the ring, a conductive loop encircling said wire and having an internal diameter larger than said wire, lamps carried by said supports for illuminating said base, wire and loops, an electric power supply, three signal lamps on said base, circuit means electrically connecting said signal lamps, wire, loop and power supply, means for holding said ring stationary in all positions of rotation of the ring, whereby said loop can be moved axially along said wire while the signal lamps remain unlit, and the signal lamps are adapted to be lit up when said loop is moved laterally to contact the wire in all positions of the ring, one of said signal lamps illuminated upon contact lasting one-fifth of a second, the second lamp one-half of a second, and the third lamp one second, a panel extending across said ring, a graduated scale on said panel coextensive with said wire for indicating a player's score at any point where the loop contacts the wire while a signal lamp lights up, a coin-actuated push-button switch in circuit with said circuit means for applying voltage to said wire when a coin depresses said switch, a solenoid having a plunger disposed to displace said coin from the switch, and a time delay relay in circuit with said switch and solenoid to activate the solenoid after a predetermined time for displacing the coin, opening the switch and cutting off voltage from said wire, said circuit means including a plurality of parallel connected time delay relays connected in circuit with said signal lamps respectively for lighting the signal lamps when said loop contacts the wire for certain predetermined times corresponding to the inherent time delay of each of said plurality of relays.

3. A game device comprising a base, a pair of upright supports on said base, a ring rotatably carried by said supports, a bare wire extending across said ring and carried around by the ring, a handle on the ring for rotating the ring and wire, a conductive loop encircling said wire and having an internal diameter larger than said wire, lamps carried by said supports for illuminating said base, wire and loops, an electric power supply, three signal lamps on said base, circuit means electrically con-

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necting said signal lamps, wire, loop and power supply, means for holding said ring stationary in all positions of rotation of the ring, whereby said loop can be moved axially along said wire while the signal lamps remain unlit, and whereby the signal lamps are adapted to be lit up when said loop is moved laterally to contact the wire in all positions of the ring, one of said signal lamps illuminated upon contact lasting one-fifth of a second, the second lamp one-half of a second, and the third lamp one second, a coin-actuated push-button switch in circuit with said circuit means for applying voltage to said wire when a coin depresses said switch, a solenoid having a plunger disposed to displace said coin from the switch, and a time delay relay in circuit with said switch and solenoid to activate the solenoid after a predetermined time for displacing the coin from the switch, opening the switch and cutting off voltage from said wire, said circuit means including a plurality of parallel connected time delay relays connected in circuit with said signal

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lamps respectively for lighting the signal lamps when said loop contacts the wire for certain predetermined times corresponding to the inherent time delay of each of said plurality of relays.

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RICHARD C. PINKHAM, *Primary Examiner*.
 DELBERT B. LOWE, *Examiner*.