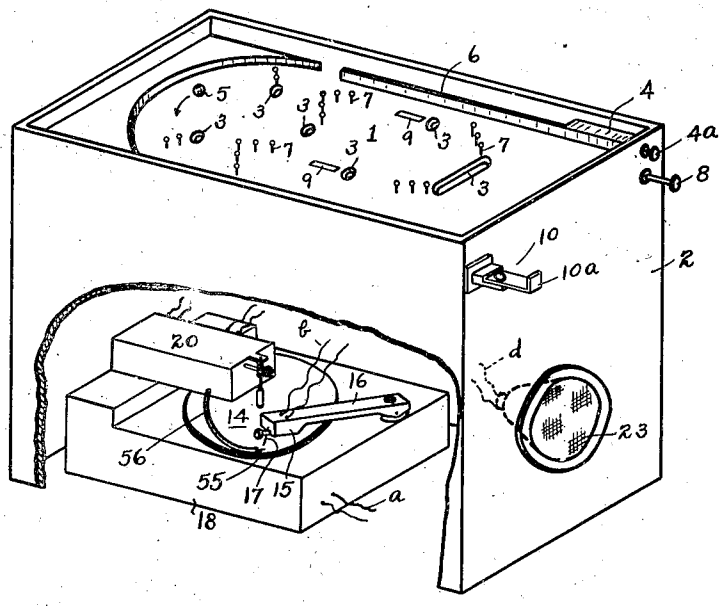
April 12, 1938. P. B. CORSELLO 2,114,138

GAME APPARATUS

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Fig. I



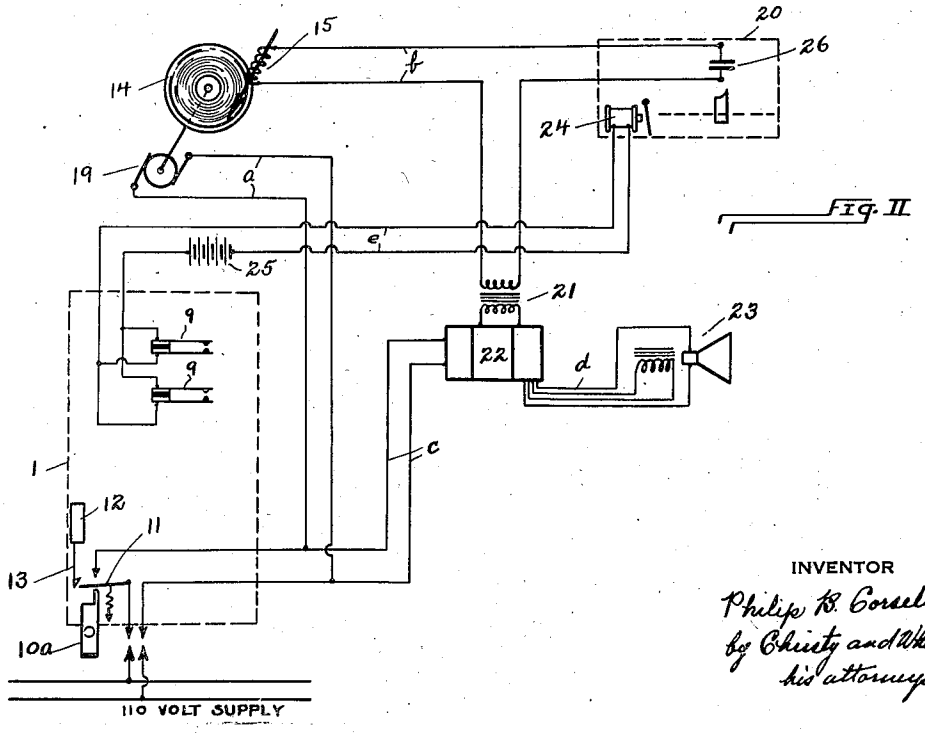


Fig. II

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April 12, 1938. P. B. CORSELLO 2,114,138

GAME APPARATUS

Filed Aug. 15, 1935 2 Sheets-Sheet 2

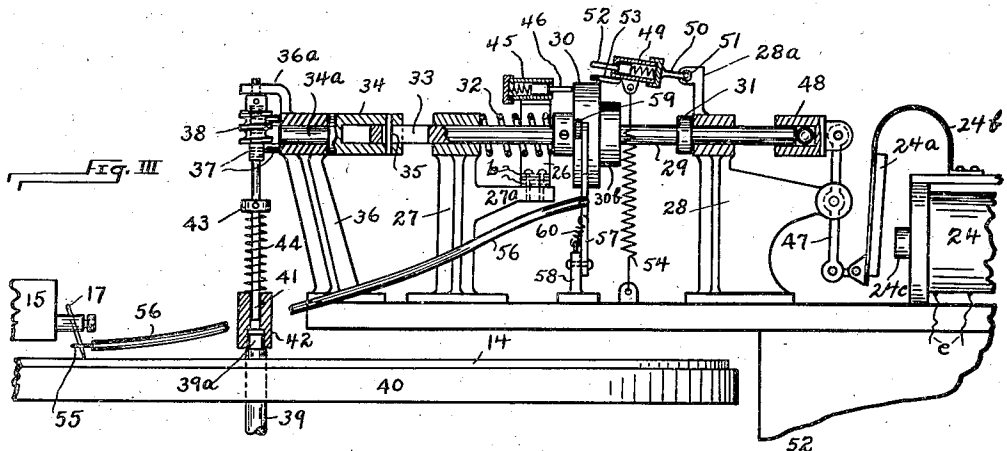


Fig. III

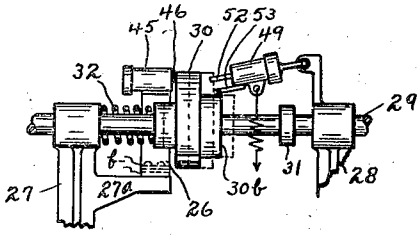


Fig. IV

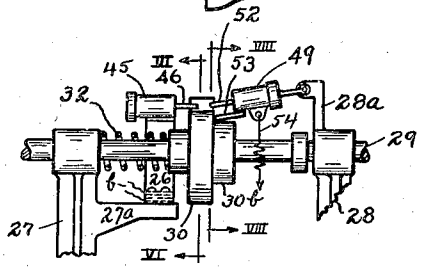


Fig. V

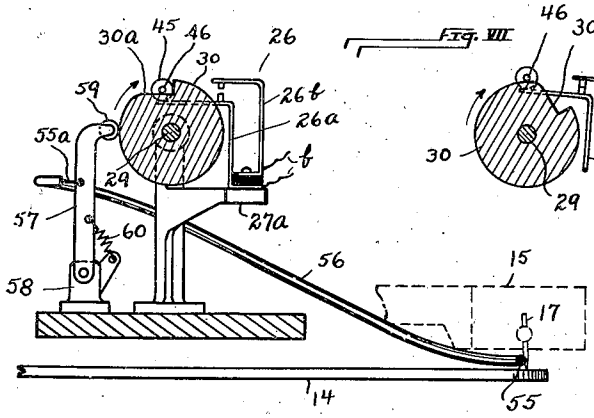


Fig. VI

Fig. VII

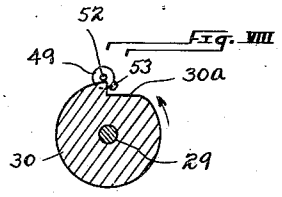


Fig. VIII

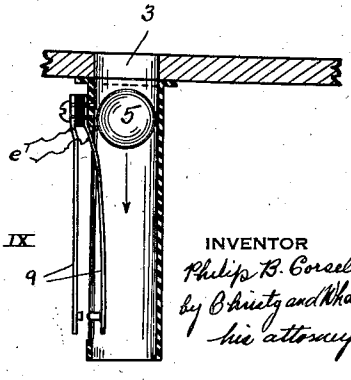


Fig. IX

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Patented Apr. 12, 1938 2,114,138

UNITED STATES PATENT OFFICE

2,114,138

GAME APPARATUS

Philip B. Corsello, Pittsburgh, Pa.

Application August 15, 1935, Serial No. 36,296

8 Claims. (Cl. 273—119)

My invention relates to apparatus for playing games, and consists in game apparatus which is adapted to speak. That is to say, the invention lies in the organization of speech-reproducing mechanism with a game, whereby, during the course of play, various audible comments are automatically directed at the players.

In exemplary way, the invention has been developed in pin-ball apparatus—a well-known sort of game apparatus which is enjoying popularity at the present time, and in such embodiment the invention will be described.

In the accompanying drawings, Fig. I is a view in perspective of a pin-ball game apparatus, a portion of the frame or body of apparatus being broken away to reveal internal structure. Fig. II is an electric wiring diagram of the apparatus. Fig. III is a fragmentary view, partly in side elevation and partly in vertical section, showing (to larger scale than Fig. I) a synchronizing device which is embodied in the speech-reproducing mechanism. Figs. IV and V are fragmentary views, comparable with Fig. III, and illustrating particular elements of the synchronizing device in successive positions of operation. Fig. VI is a fragmentary view of the synchronizing device, showing a rotatable cam element thereof in section, on the plane VI—VI of Fig. V. Fig. VII is a sectional view, on identical plane with Fig. VI, showing the cam element in a more advanced position of rotation. Fig. VIII is a sectional view of the cam on different plane; the cam is shown in a still further advanced position of rotation, and the plane of section is indicated at VIII—VIII in Fig. V. And Fig. IX is a fragmentary view, illustrating in vertical section one of the electric make-and-break devices embodied in the apparatus for controlling the speech-reproducing mechanism.

Referring to Fig. I, the pin-ball game is shown as including in usual way a playing surface 1, supported in frame 2 in a position inclined to the horizontal. The playing surface is provided with a plurality of orifices 3, and a catapult device 4 is provided for projecting balls (5) through an upwardly inclined way 6, and upon the upper end of playing surface 1. Under gravity each ball rolls downward (left to right, Fig. I) over the inclined surface 1, and falls through one or another of the orifices 3. The surface 1 carries groups of rigid, vertical pins 7, against which the rolling ball impinges; the ball is deflected by the pins and takes a tortuous course over the playing surface, finally entering one of the orifices 3; the several orifices have different scoring values, and the aim of the player is to cause the ball to enter the orifice of highest scoring value. The catapult device 4 is a well-known structure, embodying a spring-backed plunger 4a; a ball-feeding device (not shown, but also of well-known structure) is adapted, upon the thrusting in of a knobbed plunger 8, to present balls, say five balls, one after another as the player desires, to the inner end of catapult plunger 4a; as each ball is presented the player retracts the catapult plunger against spring pressure and releases it; thus, the ball is propelled up the way 6 and upon the playing surface. The further the catapult plunger is retracted, the greater is the velocity imparted to the ball upon its release; accordingly, the player retracts the plunger a greater or less distance, depending on the velocity which in his judgment should be imparted to the ball, in order for it to reach the orifice 3 he intends. When five balls have been played, the total score value of the orifices entered reflect the skill of the player.

In accordance with usual practice, one or more electric make-and-break contacts 9 are organized in the playing surface 1 (cf. Fig. I), or with particular orifices 3 (cf. Fig. IX), whereby the passage of the ball across the contacts closes an electric control circuit leading to some ancillary electric mechanism. I am aware that automatic electric score counters, electric lights, and other electric devices have, hitherto, been organized with pin-ball games, and in such manner have been controlled by make-and-break contacts, and, as will presently appear, I advantageously employ such ball-actuated contacts to control the operation of speech-reproducing mechanism.

In further accordance with usual practice, a coin-receiving device 10 is adapted normally to prevent played balls from returning to the ball-feeding device (8), so that when the total number of balls—five in this case—have been played, the apparatus is locked against further play, until the playing fee is paid, by inserting the proper coin in the device 10, and thrusting the usual slide-bar 10a of the device inward. In still further refinement, the inward thrust of the slide-bar 10a is adapted to close a master switch located in the electric wiring between the ancillary electric devices, above mentioned, and the electric supply lines. Thus, the apparatus is connected to electric supply during the play. Additionally, an automatic switch-throwing device is included with the organization; the switch-throwing device may in well-known manner embody clockwork which is set in motion when the

slide-bar 10a is thrust inward and then released for play to begin; the clockwork serves to hold the switch in circuit-closing position for a predetermined interval of time, and then automatically to release it; and the interval of time in which the switch is held in closed position is sufficient for the playing of a single game. Thus, the fee must be paid before the balls can be played or before current is supplied to the electrical elements of the apparatus, and the supply lines of the current are automatically opened at a predetermined interval after the slide-bar 10a has been thrust inward and released. All these features, generally considered, are known to the art, and it is deemed unnecessary to prolong this specification with minute consideration of them. It may be mentioned, however, that the master switch, which is responsive to the slide bar 10a for closing the electric wiring of the game apparatus with the supply lines, is indicated diagrammatically, at 11, in Fig. II, and the clockwork is indicated at 12. The clockwork includes a latch-arm 13 which, upon the inward movement of the slide-bar 10a (upward movement, as viewed in Fig. II), engages and holds the switch 11 in circuit-closing position for a predetermined interval of time. At the end of such interval the clockwork swings the latch-arm clockwise and releases the switch arm 11. The switch arm swings into open position, and connection to the electric supply is interrupted.

In accordance with my invention, I organize a phonograph record, or equivalent sound-recording means, 14 with the game apparatus. An electric pick-up 15 is mounted on an arm 16, and, through the instrumentality of the usual stylus 17, the pick-up is adapted in well-known manner to cooperate with the spiral sound-recording groove in the record. The record carries a plurality of different recorded speeces or records, such as "A very fine shot," "You have more luck than skill," "Robber, call the police," etc.; indeed, upwards of 150 different comments may be recorded in the record, and records of sounds other than speech may be carried by the record. Within a housing 18 the usual driving gear is organized for rotating the record 14 continuously, so long as the master switch (11, Fig. II) remains in closed or playing position, and record-repeating means are provided for automatically tilting the arm 16 in such manner as to lift the stylus clear of the record, then, while holding the stylus above the face of the record, swinging the arm back into starting position, and finally lowering the arm so that the stylus enters the starting groove in the record. In known way the record-repeating means operates to do this automatically as the stylus reaches the end of the record groove. Several record-repeating devices of this sort have been on the market for years, and it is needless to involve the drawings and specification of this case with a description of such well-known instrumentalities. Suffice it to say, that within the housing 18 (Fig. I) an electric motor 19 (Fig. II) is arranged in known way, to rotate the record 14, and to operate the record-repeating means; the motor 18 is connected to electric supply through lines a, and, so long as the master switch 11 is maintained (by clock-controlled arm 13) in circuit-closing position, the record is rotated continuously and the stylus 17 of the electric pick-up 15 is maintained in operative engagement with the record groove.

The electric pick-up 15 is connected, by wires b, in series with a synchronizing mechanism 20 and a coupling transformer 21 of an amplifying unit 22; the amplifying unit is energized through wires c, connected to the electric supply lines and subject to the control of switch 11, as shown in Fig. II. A dynamic speaker 23 is connected to the amplifier by means of leads d. So long as the circuits a, b, c, and d are closed, and the stylus 17 engages the groove of record 14, the speaker 23 in well-known manner will audibly reproduce the speech recorded on the record. However, as will hereinafter more fully appear, the synchronizing mechanism 20 normally interrupts the circuit b, and, in consequence, while all other elements of the apparatus may be operating with speech-reproducing effect, the speaker 23 will normally remain silent. Occasionally, during the play of the game, the synchronizing mechanism operates to close the circuit b, whereupon the speaker calls out the words recorded on the record.

Advantageously, the synchronizing mechanism includes an electromagnet 24 adapted to be energized by a circuit e. The circuit e may be energized through a transformer (not shown) connected to the 110 volt electric supply lines, or, as shown, the circuit may include a battery 25. The current required for the momentary energizing of the electromagnet is slight, and a battery will give good service. The circuit e includes two or more of the contacts 9, which, as already described, normally stand in circuit-interrupting position, and are severally adapted to be temporarily closed by the passage of a ball 5 over a certain position on the playing surface 1, or through a particular orifice 3, provided in the surface. The momentary closing of any one of the make-and-break contacts or switches 9 is effective to energize the electromagnet 24, and, as will appear below, the momentary energizing of the electromagnet is effective to operate means for closing a pair of contacts 26 and completing the circuit b. The said means for closing the contacts 26 operate automatically to hold the circuit b closed a sufficient interval of time for the apparatus to reproduce one of the speeches recorded on the record 14. Additionally, the mechanism 20 embodies means for bringing about the closing of the contacts 26 while the stylus 17 is in one or another of the unrecorded portions of the groove in record, that is, the portions of the groove between successive speech recordings. Accordingly, in each speech-reproducing operation, the circuit b is closed before the record of the particular speech to be announced enters engagement with the stylus. Thus, each time that a played ball 5 momentarily closes one of the make-and-break contacts 9, the apparatus operates to make a complete statement or comment to the player. In this way, or by manifest modifications of my invention, various ideas may be readily delevoped, to amuse the players by sound.

Turning to Figs. III to VIII, the structure of the synchronizing mechanism will be considered in detail. A shaft 29 is rotatably mounted in two standards 27 and 28, and, between the standards, the shaft carries a cam 30; a collar 31 is integrated with the shaft, and a helical compression spring 32 is organized between the cam and the standard 27; the spring tends to urge the shaft to the right, as viewed in Fig. III, while the collar 31 abuts the standard 28 and positively limits the movement of the shaft under the urging of the spring. The left-hand end of the shaft 29 (Fig. III) projects into a socket 34, and includes

a longitudinally extending slot 33, through which a pin 35 extends; the pin is fixed to the socket 34, and affords a coupling between the shaft and the socket, whereby these two elements may rotate in unison, while axial movement of the shaft relatively to the socket is permitted. The socket or coupling element 34 includes a journal portion 34a rotatably fixed in a standard 36, and a worm-gear 37 is secured upon the journal portion 34a, as shown. A worm-pinion 38 meshes with the gear 37; the worm-gear rotates in unison with the driving spindle 39 of the usual record-rotating platen 40, so that the record 14 and the shaft 29 are caused to rotate together. In this case the record moves through 8 rotations while the shaft 29 rotates once.

The particular connections between the spindle 39 and the worm-pinion 38 consist in a vertical stem 41 that carries the worm-pinion; the stem 41 is of square cross section, and at its lower end projects into a square bore in a sleeve element 42, while the upper end of the stem is rotatably supported in a bracket 36a, integral with standard 36; the upper tip 39a of the record-rotating spindle 39 is also of square cross section and nests in a correspondingly shaped recess in the sleeve 42; a collar 43 is secured to the stem 41, and, between this collar and the sleeve 42, a coiled spring 44 is arranged on the stem. The spring 44 normally urges the sleeve 42 downward into its illustrated position, whereby the spindle 39 and pinion 38 are interconnected for common rotation, and the shaft 29 is driven in harmony with the record 14. The sleeve 42 may be slid upward against the restraint of the spring 44, and the interval between the lower end of the stem 41 and the upper tip of the spindle 39 is uncovered, whereby the record 14 may be lifted free from the spindle and removed from the apparatus. Accordingly, accommodation is made for the ready interchanging of records.

The contacts 26 that are adapted to close the normally open electric pick-up circuit *b* are mounted in electric isolation from one another on a bracket 27a, extending laterally from the standard 27. As may be perceived in Fig. VI, the contacts 26 advantageously comprise two leaf springs 26a and 26b; spring 26a carries at its distal end a small cylinder 45 in which a spring-backed plunger 46 is organized. The plunger, although secured in the cylinder 45, normally projects therefrom a substantial interval, as shown in Fig. III, and in the normal position of the shaft 29, the projecting end of the plunger lies clear of the periphery of the cam 30, and the two contacts 26a, 26b stand apart, as shown in Fig. VI. It will now be shown that, by closing the circuit *e* and energizing the electromagnet 24, the constantly rotating shaft 29 is shifted, carrying the cam 30 to the left (Fig. III) and bringing the periphery of the cam into cooperative relation with the plunger 46. That is, the tip of the plunger is caused to overlie the periphery of the cam, whereby, during approximately one rotation of the cam, the plunger, sliding peripherally upon it, is elevated, the contact element 26a in consequence is swung upward and outward, and electric communication is established with the contact element 26b, as shown in Fig. VII. Thus, the circuit *b* (Fig. II) is closed, and the speaker 23 announces.

The means for shifting the shaft 29, to effect the above results, are found in a vertically arranged lever 47, pivotally mounted intermediate its upper and lower ends upon the standard 28 (Fig. III). The electromagnet 24 includes a plate 24a of soft iron, secured on an inverted U-spring 24b, and normally maintained (by the spring) an interval from the core 24c of the magnet. The upper end of the lever 47 carries a socket 48 that idly engages the end of rotating shaft 29, and the lower end of the lever is articulated with the otherwise free end of the U-shaped spring 24b. When, during the play of the game, a ball 5 effects the closing of any one of the make-and-break devices 9, and consequently effects the energizing of magnet 24, the paramagnetic plate 24a is drawn toward the magnetic core 24c, the lever 47 is swung counterclockwise, the shaft 29 is shifted to the left, the spring 32 is compressed, and the cam 30 is moved toward the cylinder 45 carried on the distal end of contact spring 26a.

It will be observed that the periphery of the cam includes a recess or depression 30a, into which the plunger 46 may extend (Fig. VI) when the cam is shifted to the left (Fig. III) by the electromagnet. It will be understood, however, that the cam 30 normally rotates continuously, and, ordinarily, the recess 30a in the cam will not lie in position to receive the plunger 46 at the moment a played ball effects the energizing of the electromagnet and the consequent shifting of shaft 29 and cam 30. In such ordinary case, the side of the laterally shifting cam engages the tip of the plunger 46 and forces it axially, against spring pressure, into its supporting cylinder 45, as shown in Fig. IV. The plunger 46 is held in such compressed position by the side face of the rotating cam, until the recess 30a in the periphery of the cam moves into alignment with the plunger. Thereupon, the plunger springs outward into the recess, as shown in Figs. V and VI. As the rotation of the cam continues, with the plunger 46 thus overlying the edge of the cam, the contact element 26a is swung upward, closing the contacts 26, as shown in Fig. VII, and completing the electric pick-up circuit *b* (Fig. II). The contacts 26 are held in closed position and the circuit *b* remains complete while the cam is making the ensuing rotation, and in such interval the speaker 23 reproduces one of the speeches recorded on the record 14.

It will be understood that the momentary closing of the contacts 9 gives only a momentary energizing of the electromagnet 24, and the tendency is for the spring 32 to restore the shaft 29 to its normal position immediately after the electromagnet is deenergized and before the cam 30 has had opportunity to operate the contacts 26 in the desired manner. To meet this condition, I provide means for holding the rotating cam in shifted position long enough for the plunger 46 to enter the recess 30a in the cam, and, having thus entered, for the cam to continue rotation through substantially 360° with the plunger riding its periphery.

As above mentioned, eight rotations of the record-turning spindle 39 produce one rotation of the cam 30; each recorded speech lies within eight turns of the continuous spiral-recording groove of the record, and, between successive recorded speeches, substantially one convolution or turn of the groove is blank or unrecorded. The angular position of the cam 30 on the shaft 29 is so oriented with the positions of the recorded speeches on the record 14 that the recess 30a in the cam always comes to alignment with the plunger 46 at the instant the electric pick-up stylus lies in an unrecorded turn in the groove of the record, that is, lies between successive

speeches recorded in the groove. Accordingly, regardless of the particular moment at which a played ball closes a contact 9 and energizes the electromagnet 24, the contacts 26 and the speech-reproducing circuit *b* are not closed until the recess 30*a* in the rotating cam moves into position opposite the plunger 46. That is to say, the electric pick-up circuit is closed precisely at the moment that a speech-recording portion of the rotating record's groove is approaching engagement with the pick-up stylus 17. Thus, the particular recorded speech is fully announced, and each time that a contact 9 is closed by a played ball, one or another of the recorded speeches will in such manner be fully announced.

The above-mentioned means for holding the cam 30 in the position, into which the momentarily energized electromagnet axially shifts it, consist in a cylinder 49 that is rigidly integrated with an arm 50, pivotally secured, at 51, to a supporting bracket 23*a*. A spring-backed plunger 52 is axially movable in the cylinder, and normally projects therefrom, as shown in Fig. III; a rigid pin 53 is carried by the cylinder 49 and projects therefrom in parallelism with the plunger. In the normal, idly rotating operation of the shaft 29, the rigid pin 53 of the cylinder 49 is held in yielding engagement with the periphery of the cam 30, by means of a spring 54. During the continuous, idle rotation of the cam, the cylinder and plunger assembly 49, 52 swing up and down about the pivot point 51, in a motion determined by the contour of the cam's periphery. When, however, the electromagnet 24 is momentarily energized, and the shaft 29 is shifted to the left (Fig. III), the rotating cam 30 is moved from beneath the pin 53, and the spring 54 draws the cylinder and plunger assembly downward; the downward movement of the cylinder assembly is arrested by suitable means, and conveniently an annular shoulder 30*b* on the cam serves to this end—the tip of the rigid pin 53 bearing on the shoulder, as shown in Fig. IV.

More specifically, the momentary energizing of the electromagnet 24 shifts the rotating cam 30 into the full-line position shown in Fig. IV; as soon as the momentary action of the magnet is ended, the compressed spring 32 shifts the cam to the right, and tends to return it to its normal position. That is to say, the spring 32 laterally shifts the rotating cam to the right, and, during such movement, the right side of the rotating cam engages the tip of the plunger 52; under the pressure of the laterally shifting cam, the plunger 52 (in being organized with a spring in cylinder 49, as shown in Fig. III) yields inward of the cylinder 49 until presently the cam comes laterally to abutment with the tip of rigid pin 53 and is arrested. The dotted lines in Fig. IV indicate the arrested position of the cam, and in such position the cam continues in rotation. The two cylinders 45 and 49 lie in common vertical plane, and it will be understood that, when the recess 30*a* in the rotating cam moves into the position shown in Fig. VI, the spring-backed plungers 46 and 52 are severally freed from engagement with the opposite sides of the cam and severally spring into such position that their tips overlie the periphery of the cam, as shown in Fig. V. (It will be readily perceived that, if the cam recess 30*a* happens to be opposite the plungers 46, 52 at the moment the electromagnet 24 is energized, the shifting of the cam will cause the tips of the two plungers immediately to enter the recess 30*a*.)

The rigid pin 53, by abutment against the right side of the rotating cam, secures the cam in position for circuit-closing cooperation with the plunger 46, and, during the uninterrupted and immediately ensuing rotation of the cam, both plungers 46, 52 ride the cam's periphery, and the contacts 26 are held in circuit-closing engagement (Fig. VII). When the cam approaches the end of the particular rotation in which both plungers 46, 52 are borne on its periphery, the cam recess 30*a* again enters the position shown in Fig. V, but now, it will be understood, the plunger 52 bears upon the peak of the cam, as shown in Fig. VIII, thereby sustaining the rigid finger 53 above or outward of the bottom of recess 30*a*. Thus, as the cam recess 30*a* moves into the position shown in Fig. VIII, the abutment of the rigid pin 53 against the side of the cam is interrupted, and, under the influence of compressed spring 32, the cam 30 and shaft 29 move to the right (Fig. V), back into normal position. As the cam thus moves into normal position (the movement of the cam in Fig. VIII being on the line of sight) the tip of rigid pin 53 enters the recess 30*a*. The pin 53 rides the periphery of the now idly rotating cam 30, in the manner already described, and illustrated in Fig. III.

As already mentioned, the electric pick-up 15 is, by known record-repeating means, automatically lifted and returned from the end of the recording groove of the record 14 to the beginning, so that, during the play of the game, the stylus 17 continuously engages the groove of the rotating record, excepting, of course, the short time intervals in which the record-repeating means operate.

I have found that each time the pick-up 15 is automatically lifted and carried, by the record-repeating means, from the end of the record to the beginning, the stylus 17 must be started in the record groove at a particular point circumferentially of the record, otherwise the above-described synchronism, or coordinated relation, of the cam 30 with respect to the positions of the several speeches recorded on the record will be destroyed. In order to maintain this coördination, I provide an abutment 55 against which the stylus 17 is automatically positioned by said record-repeating means. The stylus naturally tends to follow the rotating record's groove, but the abutment 55 normally bars such movement of the stylus until the rotating record reaches the proper angular position of coordination with respect to the cam. Thereupon, the abutment is automatically retracted and the stylus enters the recorded groove of the record.

Advantageously, the abutment 55 comprises the terminal of a flexible steel wire that extends through a rigidly supported guiding tube 56. The remote end (55*a*) of the wire is connected to an arm 57 (cf. Figs. III and VI); the arm is pivoted at its lower end to a frame element 58, and carries at its upper end a wheel 59 that is maintained in engagement with the periphery of cam 30, by means of a tension spring 60 acting on the arm. Normally, the arm 57 stands in the position indicated in Fig. VI, and in such position of the arm the end 55 of the wire projects from the end of tube 56. The record-repeating means, in restoring pick-up 15 to the beginning of the record, places the stylus 17 to the right of the wire terminal 55, as viewed in Fig. VI, and it will be understood that, so long as the end of the wire projects from the tube 56, it serves to bar the movement of the stylus 17 into the record's groove. When the recess 30*a*

of the continuously rotating cam 30 moves into registry with the wheel 59, the arm 57 swings clockwise (Fig. VI) under the tension of spring 60, and such movement of the arm shifts the wire within the tube 56 and retracts the projecting end 55 of the wire. Thereupon the stylus is freed of restraint, and beings to "follow" the record's groove. The proportions and relative speeds of the moving parts are so determined that the wire 55 is retracted at just the proper time for the stylus to start "following" the groove at a point in advance of the first speech recording on the record. Thus, the position of the stylus in the record's groove is oriented with the recess 30a in the rotating cam 30 in such manner as to produce the synchronized operation above described. During the continuous rotation of the cam, the arm 57 is oscillated intermittently, and the wire within the tube 56 is correspondingly reciprocated, periodically retracting and projecting the tip 55 of the wire. Of course, if the wire tip 55 is in retracted position when the pick-up 15 is returned to initial position, the stylus will immediately begin to "follow" the groove in proper orientation with the recess 30a in the cam.

In considering the following claims, it will be understood that the orifices 3 in the playing surface 1 (Fig. I) comprise scoring regions, and that each ball 5 comprises a movable playing element. And it is contemplated that my automatic speech or sound-reproducing mechanism may be used with apparatus other than pin-ball games.

I claim as my invention:

1. Game apparatus including a playing surface and one or more scoring zones, a movable playing element, sound-producing mechanism arranged in cooperative relation with a member bearing a plurality of sound recordings, means connected to said sound-producing mechanism for controlling its operation, said means including a normally open circuit, means responsive to said playing element for closing said circuit, and a device responsive to the closing of such circuit for automatically initiating sound-producing operation of said mechanism at the beginning of one of the several recordings on said member, and means for automatically terminating such operation at the end of such recording.

2. Game apparatus including a playing surface and one or more scoring zones, a movable playing element, sound-producing mechanism arranged in cooperative relation with a member bearing a plurality of sound recordings, means connected to said sound-producing mechanism for controlling its operation, said means including a normally open circuit, means responsive to said playing element for closing said circuit and a device responsive to the closing of such circuit for automatically initiating sound-producing operation of said mechanism at the beginning of one of the several recordings on said member, and means for automatically terminating such operation at the end of such recording, said circuit including a circuit-controlling switch actuated by said playing element.

3. Game apparatus including a playing element and mechanism including a rotating member bearing a plurality of sound recordings, an electric pick-up cooperating with said record-bearing member, an electrically operated speaker, an electric circuit connecting said pick-up to said speaker, and means operated by said playing element for controlling said circuit.

4. Game apparatus including a movable playing element and mechanism including a rotating member bearing a plurality of sound recordings, an electric pick-up cooperating with said rotating member, an electrically operated speaker, an electric circuit from said pick-up to said speaker, and means responsive to said playing element and including a member rotatable in synchronism with said record-bearing member for controlling said circuit.

5. Game apparatus including a movable playing element and mechanism including a rotating member bearing a plurality of sound recordings, an electric pick-up cooperating with said rotating member, an electrically operated speaker, an electric circuit from said pick-up to said speaker, means including a member rotatable in synchronism with said record-bearing member for controlling said circuit, and means actuated by said playing element for controlling the operation of said circuit-controlling means.

6. Game apparatus including a movable playing element, a rotating member bearing a plurality of sound recordings, an electric circuit, an electric pick-up included in said circuit, said pick-up including a stylus cooperating with said member, and means for automatically returning said pick-up from the end of the recordings on said rotating member to the beginning, mechanism operating in synchronism with said rotating member, said mechanism including an electric make-and-break device for controlling said circuit, and means actuated by said playing element for controlling operation of said make-and-break device.

7. Game apparatus including a playing element and mechanism including a rotating member bearing a plurality of sound recordings, an electric pick-up cooperating with said member, an electrically operated speaker, an electric circuit connecting said pick-up to said speaker, means operated by said playing element for controlling said circuit, means for automatically returning said pick-up from the end of the recordings on said rotating member to the beginning, and means for orienting the position of said pick-up at said beginning with the first recordings on said rotating member.

8. Game apparatus including a movable playing element, a rotating member bearing a plurality of sound recordings, an electric circuit, an electric pick-up included in said circuit, said pick-up including a stylus cooperating with said rotating member, and means for returning said pick-up from the end of the recordings on said rotating member to the beginning, mechanism operating in synchronism with said rotating member for controlling said circuit, said mechanism including an electric make-and-break device, an electromagnet for initiating operation of said make-and-break device, and a switch operated by said playing element for controlling energizing of said electromagnet.

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