Feb. 29, 1944. J. F. EAKINS 2,342,652

MULTISELECTIVE PHONOGRAPH

Filed Feb. 15, 1942 3 Sheets-Sheet 1

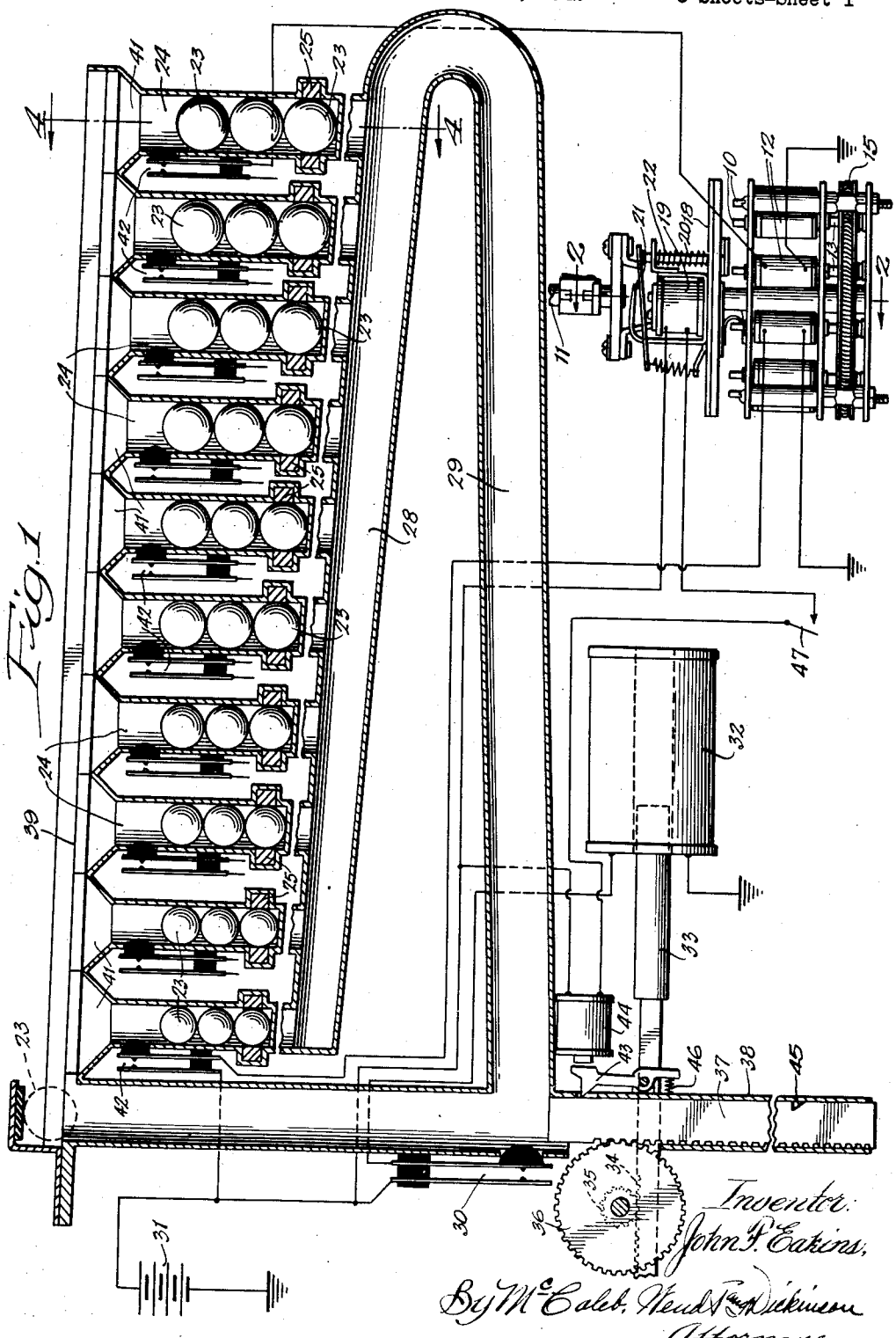


Fig. 1

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Fig. 3

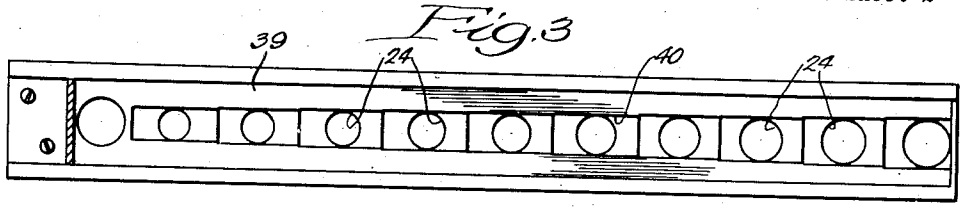


Fig. 2

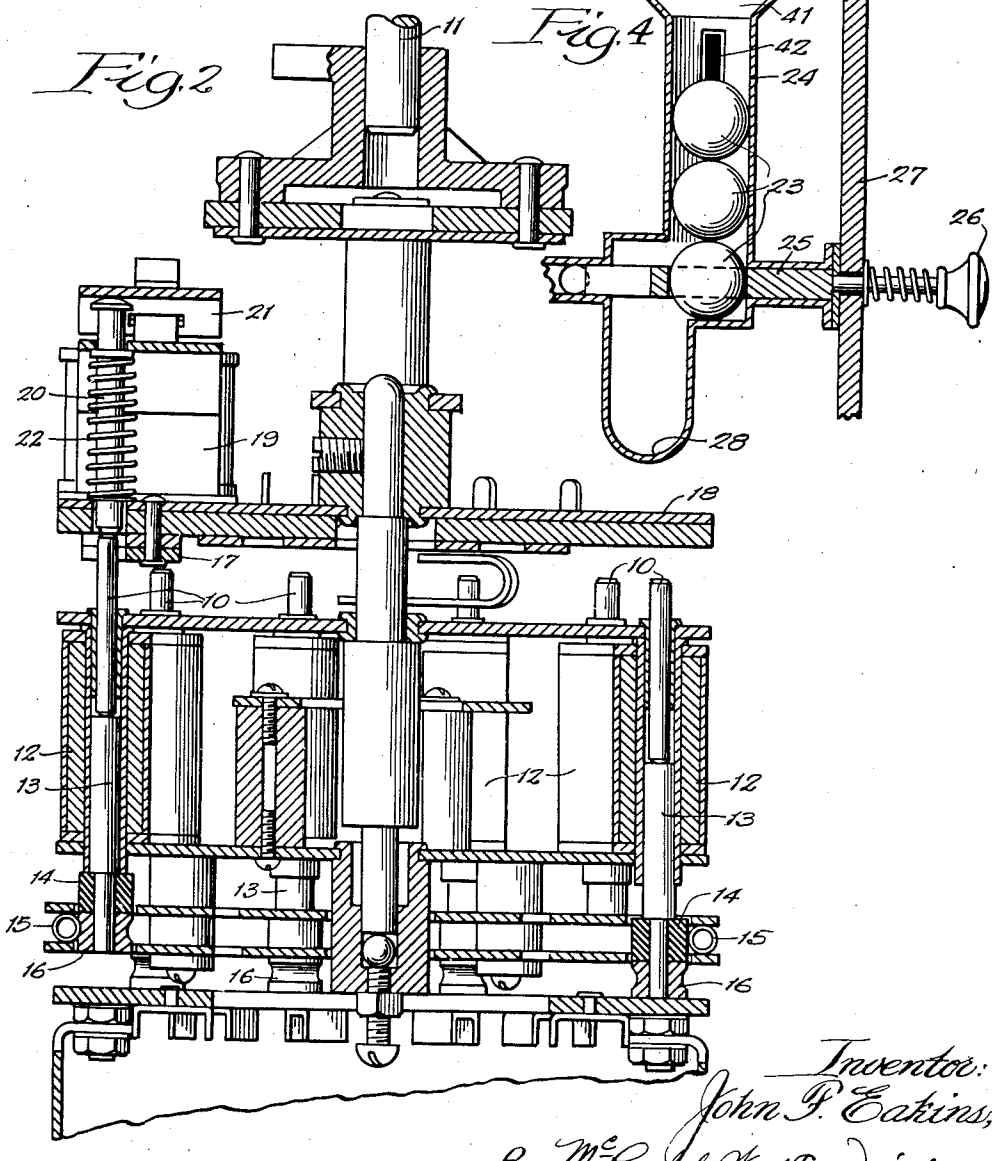


Fig. 4

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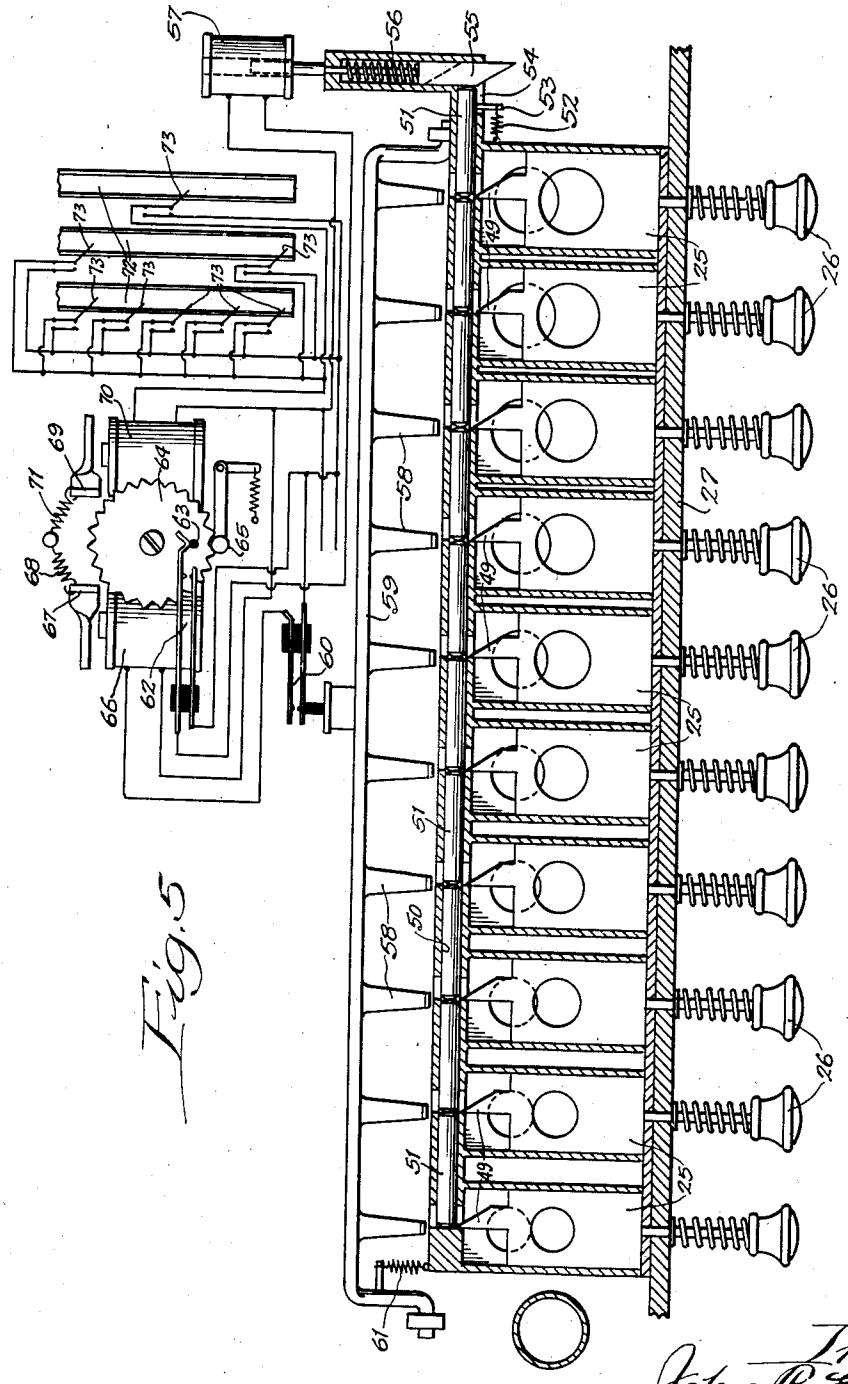


Fig. 5

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Patented Feb. 29, 1944

2,342,652

UNITED STATES PATENT OFFICE

2,342,652

MULTISELECTIVE PHONOGRAPH

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Application February 13, 1942, Serial No. 430,705

15 Claims. (Cl. 177—353)

This invention relates to multi-selective phonographs and particularly to the selective mechanism therefor.

One of the objects of the invention is to provide an improved selective phonograph.

A further object of the invention is to provide an improved simple phonograph adapted for the selection of a plurality of recordings and adapted to reproduce the recordings in the order in which they are selected.

Other objects, advantageas and capabilities of the present invention will appear from the following description of a preferred embodiment thereof taken in conjunction with the accompanying drawings, in which:

Figure 1 is a sectional view through a selector embodying the invention associated with phonograph elements with which the same is adapted to cooperate;

Fig. 2 is a sectional detail of part of the selector mechanism taken on the line 2—2 of Fig. 1;

Fig. 3 is a plan view of the separator mechanism shown in Fig. 1;

Fig. 4 is a sectional detail of the selector mechanism taken on the line 4—4 of Fig. 1; and

Fig. 5 is a diagrammatic sectional plan view showing mechanism which prevents selection of more than one record at one time and also coin controlled means whereby selection may be limited to a number corresponding to the coin or coins inserted by a patron.

My improved selector may be used with any phonograph comprising individual selector means corresponding to individual recordings. For example, my improved selector may be readily associated with the phonograph described and claimed in the application of Marion R. Winkler, Serial No. 342,419, filed June 26, 1940. Consequently, in the present application only such parts of such phonograph as are necessary for the understanding of the operation of my improved selector will be described herein.

The phonograph referred to comprises individual pins 10 each of which corresponds to a certain position of a shaft 11 and the position of that shaft causes a corresponding recording to be played by the phonograph. Each pin 10 is adapted to be moved to an elevated position (left-hand side of Fig. 2) by means of a solenoid 12, there being one solenoid 12 associated with each pin 10.

The pins 10 rest upon the armatures 13 of the solenoids. It will readily be understood with reference to Fig. 2 that when a solenoid 12 is energized, its armature 13 moves upwardly and the pin 10 resting on that armature is moved to an elevated position.

The armature 13 is provided with a collar 14 of insulating material, this collar being normally in contact with a conductive ring 15. When the armature 13 is moved upwardly, a conductive collar 16 thereon engages the conductive ring 15 and this completes the circuit of the motor of the phonograph so that the same is put into operation.

The phonograph remains in operation as long as any of the pins 10 is in elevated position. Furthermore, after all the pins 10 and armatures 13 are depressed to normal position, the phonograph motor continues to operate by virtue of a hold-over switch until the record corresponding to the last pin 10 has been played.

After the playing of each record, the shaft 11 is rotated by the phonograph motor through friction driven means until an abutment 17 carried on a disk 18 rigidly mounted on the shaft 11 engages an upwardly displaced pin 10. If there is no upwardly displaced pin 10, the record-changing operation of the phonograph opens the hold-over switch (not shown) and brings the operation of the motor to a stop.

As fully described in the application referred to, each pin 10 and its associated solenoid 13 is returned by an electromagnet 19. When the disk 18 is arrested by engagement of a pin 10 by the abutment 17, a pin 20 is located above and in alignment with the pin 10. The upper end of the pin 20 is adapted to be engaged by the armature 21 of the electromagnet 19. A spring 22 normally biasses the pin 20 upwardly. It will readily be understood that when the electromagnet 19 is energized, the armature 21 moves downwardly and forces the pin 20 downwardly against the action of the spring 22, thus returning the pin 10, which is in alignment with the pin 20, to its normal position, and returning the corresponding armature 13 to its normal position.

From the foregoing it will readily be understood that the phonograph referred to is one in which any desired number of records can be played by merely and momentarily energizing the corresponding solenoids 12. If the phonograph of the above-identified application has a plurality of its solenoids 12 energized, then the order in which the corresponding selections will be reproduced will be independent of the order of selection. The order of playing will depend upon the initial position of the abutment 17 and the location of the corresponding solenoids 12 and pins 10 in their circular series.

My invention employs the general principle of

having a plurality of separable elements each corresponding to one particular recording. When each recording is selected, a corresponding element is released and means are provided for locating a plurality of such elements in a series corresponding to the order of their release. Each element is displaced individually in order and is moved into a path depending upon its own distinctive characteristics. Means are provided with that path for the actuation of the selective member corresponding thereto.

While the elements may have any of a plurality of individual features whereby the same may be classified and separated, I prefer to employ members which are differentiated from each other by size and I prefer to employ a separating mechanism depending for its operation upon the different sizes of the elements. Thus, in the preferred form of the embodiment, I provide a plurality of balls 23 of varying sizes, the balls of one size corresponding to one recording, the balls of another size corresponding to another recording, and so forth.

If desired, a single ball corresponding to a single recording may be employed. I prefer to provide a plurality of balls of each individual size and this enables a patron to select a program in which any recording may be included for a plurality of times, such recording being, of course, reproduced in the proper order of selection as indeed are all the recordings.

Referring to Fig. 1, it will be noted that I provide three balls of each size and that these balls are normally located in individual tubes 24. The lowermost ball is located in an opening in a slide 25 which is arranged to be displaced inwardly by a handle 26 which is located outside the housing 27 in which the selector mechanism and phonograph are located.

As best seen in Fig. 4, the inward displacement of the handle 26 causes the lowermost ball 23 to be moved into alignment with a trough 28 into which it may fall from the slide 25. When the slide 25 returns to its normal position, the next ball 23 descends into the opening therein.

The ball descends in the sloping trough 28 and moves into a tube 29 which is adapted to receive any and all of the balls in series. A ball in the lower end of the tube 29 is arranged to engage a switch 30 and close the same. The switch 30 is connected to a suitable source of current such as a battery 31 and also to a solenoid 32. The armature 33 of the solenoid is integral with a rack 34.

When the solenoid 32 is energized, the rack 34 is moved to the right, as viewed in Fig. 1, and the pinion 35 is rotated in the counterclockwise direction. The pinion 35 is integral with a gear 36. The gear 36 meshes with the teeth on a rack 37 which is guided for vertical movement by means of a guide housing 38. The rack 37 serves as a ram, being adapted to engage the lowermost ball in the tube 29 and to elevate it up into the dotted line position in Fig. 1. The movement of the rack 37 is limited by any suitable means (not shown) so as to transfer the lowermost ball from the tube 29 up to the high end of a track 39 which forms part of the ball separator or classifier.

The ball thus elevated rolls down this track 39. As best shown in Fig. 3, the track is provided with a longitudinal slot 40 which increases in width in the high to low direction. As best seen in Fig. 3, the increase may be in consecutive steps. Along the slot 40 are arranged a plurality of ball-receiving hoppers 41 each of which gives in to one of the vertical tubes 24. It will thus be seen that these vertical tubes receive balls of increasing diameter from left to right as viewed in Fig. 1.

Thus, if the ball which was elevated by the rack 37 is of size No. 5, then it rolls down the chute 39 and drops into No. 5 tube 24. That is, when the ball reaches a stepped portion of the slot 40 of width equal to or just slightly more than its diameter, it drops through the slot into the corresponding hopper 41 and into the corresponding tube 24.

In thus falling, the ball is adapted to close an individual switch 42, there being one switch 42 for each tube 24, each switch being actuated by balls of only one size. Each switch is connected in circuit to one of the solenoids 12, each solenoid 12 being in series with one of the switches 42 and with the battery 31.

When the rack 37 moves upwardly, a detent 43 on the armature of an electromagnet 44 enters into a recess 45 on the rack, the detent 43 being biassed towards the rack by a compression spring 46. Thus, the rack 37 is held in elevated position for some time after it moves into that position.

The electromagnet 44 is in series with the battery 31, with the switch 47, and with the electromagnet 19. The switch 47 is part of the phonograph referred to, being momentarily closed during each record-changing operation.

It will be noted that when the switch 47 is momentarily closed, the electromagnet 19 and the electromagnet 44 will be energized simultaneously. The corresponding pin 10 will thus be returned and at the same time the detent 43 will will be withdrawn from the rack 37 so that this rack is free to descend to normal position in alignment with the lower end of the tube 29.

The rack 37 is so arranged that it does not close the switch 30. Consequently, when the rack 37 is in its upward position, the switch 30 is opened. When the rack 37 returns to its lowermost position, the next ball in the tube 29 impinges against the switch 30 and closes it, thus again energizing the solenoid 32 and elevating the next ball.

The operation is as follows: Assuming the phonograph to be out of operation, all the pins 10 are down. The operator now pushes a plurality of the buttons 26 one after the other. The first one which he actuates discharges the corresponding ball 23 into the tube 29 and the balls line up in the tube 29 in the order in which he presses the buttons 26. Thus, the balls may descend in the tube 29 in the order No. 7, No. 5, No. 1, No. 10.

The first ball No. 7 closes the switch 30 which energizes the solenoid 32 and this first ball is immediately moved up to the trough 39. It descends down this trough until it gets over the No. 7 tube 24 whereupon it falls into that tube. The plunger 37 moves upwardly and the ball No. 5 leans against it at the bottom of the tube 29. Ball No. 1 leans against ball No. 5 and ball No. 10 leans against ball No. 1. In other words, they form a series with balls No. 5, No. 1 and No. 10 in the 1, 2 and 3 position, reading from left to right on Fig. 1.

The closing of No. 7 switch 42 energizes No. 7 solenoid 12, completing the motor circuit and pushing into its upward position No. 7 pin 10. The operation of the phonograph motor rotates the shaft 11 until abutment 17 engages No. 7

pin 10, thus arresting shaft 11 and mechanism associated therewith No. 7 position. No. 7 record is then moved out and played and during the moving out operation, the switch 47 is closed and the electromagnets 19 and 44 are energized.

No. 7 pin 10 is thus returned and detent 43 is withdrawn from the recess 45 so that the plunger 37 moves down to normal position. The motor continues to operate for the playing of selection No. 7 by virtue of the holdover switch.

The downward movement of the plunger 37 permits No. 5 ball 23 to close the switch 30 so that the No. 5 ball is elevated up to the trough 39 and runs down this trough until it drops into No. 5 tube 24 closing the No. 5 tube 42 and energizing the No. 5 solenoid 12. This projects upwardly the No. 5 pin 10 and completes a shunt circuit for the motor so that the same does not cease to operate when the holdover switch opens in the next record-changing operation. No. 5 pin is the only pin in the upward position and after No. 7 record is played and the record-changing cycle begins, the projection 17 engages No. 5 pin 10 and recording No. 5 is played.

It will readily be apparent that the operation just described is repeated with No. 1 ball 23 and No. 10 ball 23. When No. 10 record is played, no pin 10 or armature 13 is in elevated position. When the holdover switch again opens, the motor stops until the operator again releases a ball 23 into the tube 29.

Of course it will be understood that any series of recordings may be selected in order, and that this series may include a plurality of balls 23 corresponding to a single recording. Thus, the operator may select No. 10, No. 5, No. 3, No. 5, and No. 1, if he desires, and the corresponding recordings will be played in this order.

If desired, the phonograph may be arranged for coin control. In Fig. 5 I have shown a modification for this purpose. In this modification each of the plungers 25 is provided with a wedge-shaped projection 49 which is adapted to project through a longitudinal channel 50. The channel 50 contains a series of plungers 51 of equal size, the plungers being as long as the spacing between two adjacent buttons 26.

The right-hand plunger 51 is biased inwardly by a spring 52 which is connected to a pin 53 which projects from said plunger through a slot 54 in the channel 50. The slot 54 and pin 53 are so arranged that when the plungers 51 are moved inwardly by the spring 52 to their innermost position, adjacent ends of the plungers will be located in alignment with the wedge-shaped points of the projections 49. When in this position the right-hand plunger 51 is adapted to be engaged by a bolt 55 which is normally biassed by a spring 56 into alignment with the plungers 51.

The bolt 55 is adapted to be withdrawn from this position by means of a solenoid 57. It will be understood that when the bolt 55 is in the position in which it is shown in Fig. 5, it is impossible to move any of the buttons 26 inwardly. When, however, the solenoid 57 is energized, the bolt 55 is moved rearwardly, as viewed in Fig. 5, and then any one of the buttons 26 may be moved inwardly.

Two buttons 26 cannot be moved inwardly because the channel 50 is not sufficiently long to accommodate all the plungers 51 and more than one of the projections 49. When one of the buttons 26 is moved inwardly, the plungers 51 to the right of that button are moved to the right. None of the other buttons 26 may be moved in, even partially, until after the first-named button 26 has been released and its projection 49 has been withdrawn. The plungers 51 to the right of the actuated button 26 have their points of engagement out of alignment with the projections 49. The plungers 51 to the left of the actuated button 26 have their points of contact in alignment with projections 49 but these plungers 51 cannot move either to the left or to the right owing to the engagement of the left-hand plungers 51 with the end of the channel 50 and the engagement of the right-hand plunger of this group with the straight edge of the actuated projection 49. Consequently, a second button 26 cannot be actuated until after the first button is released and until it moves back to its normal position. Even then another button cannot be actuated unless the bolt 55 is moved out of alignment with the plungers 51 by energization of the solenoid 57.

Each time that one of these projections 49 is moved forwardly to enable its associated slide 25 to drop a ball 23 into the channel 28, the projection 49 engages an element 58 carried on a pivoted bail 59 and moves the bail 59 rearwardly in such manner as to close a switch 60. The switch 60 is normally held open by a spring 61 which is connected to the bail 59 and to any suitable fixed point on the machine. The solenoid 57 is connected through a switch 62 to any suitable source of power. The switch 62 is normally held open by the engagement of a pin 63 on the credit wheel 64 with a lateral extension on the end of one of the switch arms. The credit wheel 64 may suitably be a ratchet wheel mounted for rotation and provided with a spring-pressed plunger 65 which tends to hold it in its position of adjustment.

The switch 60 is connected in series with a source of power and with an electromagnet 66. This electromagnet is provided with a pivoted armature 67 which is normally biassed away from the wheel 64 by means of spring 68. Each time the switch 60 is closed, the electromagnet 66 is energized and the armature 67 is moved downwardly. The armature 67 is so formed that it engages the credit wheel 64 and moves it one tooth in the counterclockwise direction each time that the switch 60 closes. It is to be noted that the pin 63 is able to pass the arms of the switch 62, this pin only engaging the lateral projection of one of the arms of the switch 62 in the position shown in Fig. 5.

The credit wheel 64 is adapted to be moved in the opposite direction, that is, the clockwise direction, by means of the armature 69 of an electromagnet 70. The armature 69 is biassed upwardly by a spring 71 and is arranged to engage the credit wheel 64 and move it one tooth in the clockwise direction each time that the electromagnet 70 is energized. The electromagnet 70 is connected to any suitable coin actuated switch.

Thus, I may provide the phonograph with three chutes 72 adapted to receive nickels, dimes and quarters. The nickel chute includes one switch 73 adapted to be closed by the passage of a nickel. The dime chute includes two switches 73 adapted to be closed by the passage of a dime. The quarter chute 72 includes five switches 73 each adapted to be closed by the passage of a quarter. All switches 73 are connected in parallel and are connected in series with the electromagnet 70 and with a source of power.

The operation is as follows: The solenoid 57 is normally deenergized and the bolt 55 is normally in alignment with the plungers 51. The points of contact between adjacent plungers 51 are in alignment with the projections 49 of the slides 25. None of these slides can be moved inwardly because it is necessary for one or more of the plungers 51 to move to the right to permit such inward movement.

Assume now that a patron drops a coin in one of the chutes 72, then the electromagnet 70 is energized once, or a plurality of times. For example, if a quarter has been inserted, the electromagnet 70 is energized five times. The armature 61 moves downwardly five times and moves the credit wheel 64 five steps in the clockwise direction. The movement of the pin 63 with the credit wheel 64 closes the switch 62 and the solenoid 57 is energized. The bolt 55 is moved rearwardly, as viewed in Fig. 5, and now the patron can push in five of the buttons 26 to make five selections. This is now possible because sufficient room is provided for the plungers 51 to move to the right. It is, however, possible only to push in one of the buttons 26 at any one time.

If the button 26 is moved inwardly sufficiently to discharge one of the balls 23 into the chute 28, the switch 60 is closed once and consequently the electromagnet 66 is energized once. The energization of the electromagnet 66 moves the armature 67 downwardly once and consequently the pin 63 is moved one step towards its initial position. When the last selection paid for, for example, the fifth selection, is being made, the switch 60 is closed for the fifth time, the armature 67 moves downwardly for the fifth time, and that brings the pin 63 into a position to open the switch 62.

The solenoid 57 is deenergized and the spring 56 moves the bolt 55 forwardly. As the button 26 is released or is allowed to move back by the operator, the associated wedge-shaped projection 59 is withdrawn forwardly, as viewed in Fig. 5, and the plungers 51 to the right of it move to the left so as to bring the two separated plungers 51 into engagement again with their point of contact in alignment with the wedge-shaped end of its projection 49. During this inward movement, the bolt 55, which is provided with a sloping end, moves forwardly and when the actuated button 26 has moved completely outwardly again, the bolt 55 again assumes locking position.

Although I have described this invention in connection with certain specific elements such as balls of varying sizes, it must be understood that my invention is not intended to be limited thereto, since objects of other shapes may obviously be employed, if desired. Furthermore, I do not intend to be limited to selective separation of elements by size, since it is obvious that any other physical property of such objects may be employed, if desired. My invention contemplates the provision of a plurality of individual elements having characteristics whereby they may be separated, and selecting means for arranging any of these different elements in an order corresponding to a program which the operator desires to be played in order, and means whereby these elements may be used individually for the selection of its corresponding recording.

Although the invention has been described in connection with specific details of a preferred embodiment thereof, it must be understood that such details are not intended to be limitative of the invention, except insofar as set forth in the accompanying claims.

I claim:

1. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording, means for releasing said elements in desired order, means for collecting said released elements in said order, separating means for separating each individual element from all other elements corresponding to other recordings, means for removing said elements one at a time and in said order from said series and supplying said elements to said separating means, means effective after the reproduction of a recording for operating said removing and supplying means, and individual selector members adapted to be actuated by individual elements after said separation.

2. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording, the elements corresponding to different recordings having different physical properties whereby they may be separated, means for releasing said elements in desired order, means for collecting said released elements in said order, separating means for separating each individual element by said physical properties from all other elements corresponding to other recordings, said separating means comprising a plurality of individual paths for said elements, means for supplying said elements individually and in said order to said separating means, means effective after the reproduction of a recording for operating said supplying means, and individual selector members in said paths adapted to be actuated by individual elements after said separation.

3. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording and possessing individual physical properties whereby each may be separated from all other elements corresponding to other recordings, means for forming a series of said elements in desired order, a separator adapted to separate said elements by virtue of their differential physical properties and comprising means providing a plurality of individual paths for the individual elements, means for periodically supplying said elements one after the other from said series, means effective after the reproduction of a recording for operating said supplying means, and individual means in said paths adapted to be actuated by the corresponding individual members for initiating the playing of the corresponding recording.

4. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording and possessing individual physical properties whereby each may be separated from all other elements corresponding to other recordings, means for forming a series of said elements in desired order, a separator adapted to separate said elements by virtue of their differential physical properties and comprising means providing a plurality of individual paths for the individual elements, means for periodically supplying said elements one after the other from said series, and individual means in said paths adapted to be actuated by the corresponding individual members for initiating the playing of the corresponding recording, and means actuable by said phonograph after the reproduction of a re-

cording for controlling the supply of the next individual element from said series to said separator.

5. A selector for automatic phonographs comprising a plurality of freely movable elements each individually corresponding to an individual recording and possessing individual physical qualities whereby the elements corresponding to one recording can be separated from all other elements corresponding to other recordings, manually operable means whereby any plurality of said elements can be arranged in a series in desired order, separating means for separating individual elements from all other elements corresponding to other recordings and including individual receptacles corresponding to individual recordings, means actuable by the phonograph after the reproduction of a recording for supplying said elements one at a time to said separating means, and individual means associated with said receptacles for controlling the playing of the corresponding individual recordings.

6. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording, individual receptacles each adapted to receive a plurality of identical elements corresponding to an individual recording, means for discharging any desired element from its receptacle, means for collecting said elements in the order in which they are discharged, separating means for separating each individual element from all other elements corresponding to other recordings, means individual to said individual elements for controlling the playing of the corresponding recording, means for supplying said elements in said order from said collecting means to said separating means, and means effective after the reproduction of a recording for operating said supplying means, whereby the recordings corresponding to the collected elements are played in said order.

7. In a phonograph selector, in combination, switch means for putting the phonograph into operation, individual selector means movable from normal to actuated position and each determining individually the playing of a corresponding recording, a plurality of freely movable elements corresponding to individual recordings and each having physical properties whereby the same may be separated from all other elements corresponding to other recordings, manually operable means for forming a series of said elements in desired order, a separator for separating said individual elements into a plurality of paths corresponding in number to the corresponding recordings, automatic means for transferring individual elements from said series and in the series order to said separator, means associated with each of said paths whereby the passage of an element therethrough effects the actuation of the corresponding selector member and closes said switch means, and means actuable by the phonograph after the reproduction of a recording for controlling the operation of said automatic means for supplying said elements to said separator whereby said elements are thus supplied one at a time between recording reproductions to provide a continuous program.

8. In a phonograph selector, in combination, switch means for putting the phonograph into operation, individual selector means movable from normal to actuated position and each determining individually the playing of a corresponding recording, phonograph actuated means for returning said selector means to normal position, a plurality of freely movable elements corresponding to individual recordings and each having physical properties whereby the same may be separated from all other elements corresponding to other recordings, manually operable means for forming a series of said elements in desired order, a separator for separating said individual elements into a plurality of paths corresponding in number to the corresponding recordings, automatic means for transferring individual elements from said series and in the series order to said separator, means associated with each of said paths whereby the passage of an element therethrough effects the actuation of the corresponding selector member and closes said switch means, and means actuable by said phonograph after the reproduction of a recording for controlling the operation of said automatic means for supplying said elements one at a time to said separator whereby said elements are supplied periodically to provide a continuous program.

9. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording, the elements corresponding to each recording having different sizes than all other elements, means for releasing said elements in desired order, means for collecting said released elements in said order, separating means for separating each individual element from all other elements by virtue of its individual size, means for removing said elements in said order from said series and supplying said elements to said separating means, means effective after the reproduction of a recording for operating said removing and supplying means, and individual selector members adapted to be actuated by individual elements after said separation.

10. A selector for automatic phonographs comprising a plurality of elements individually corresponding to an individual recording, the elements corresponding to different recordings having different sizes whereby they may be separated, means for releasing said elements in desired order, means for collecting said released elements in said order, separating means for separating the elements of different sizes, said separating means providing a plurality of individual paths for the separated elements, means for supplying said elements individually and in said order to said separating means, means effective after the reproduction of a recording for operating said supplying means, and individual selector means in said paths adapted to be actuated by individual elements after said separation.

11. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording and being of individual sizes whereby each may be separated from all other elements corresponding to other recordings, means for forming a series of said elements in desired order, a separator adapted to separate said elements by virtue of their different sizes and comprising means providing a plurality of individual paths for the individual elements, means for periodically supplying said elements one after the other from said series, means effective after the reproduction of a recording for operating said supplying means, and individual means in the said paths adapted to be actuated by the cor-

responding individual members for initiating the playing of the corresponding recording.

12. A selector for automatic phonographs comprising a plurality of elements each individually corresponding to an individual recording and being of individual sizes whereby each may be separated from all other elements corresponding to other recordings, means for forming a series of said elements in desired order, a separator adapted to separate said elements by virtue of their different sizes and comprising means providing a plurality of individual paths for the individual elements, means for periodically supplying said elements one after the other from said series, individual means in the said paths adapted to be actuated by the corresponding individual members for initiating the playing of the corresponding recording, and means actuated by said phonograph after the playing of a recording for the operation of said supplying means to effect the supply of the next individual element from said series to said separator.

13. A selector for automatic phonographs comprising a plurality of freely movable elements each individually corresponding to an individual recording and possessing individual sizes whereby the elements corresponding to one recording can be separated from all other elements corresponding to other recordings, manually operable means whereby any plurality of said elements can be arranged in a series in desired order, separating means for separating individual elements from all other elements corresponding to other recordings by virtue of their different sizes and including individual receptacles corresponding to individual recordings, means controlled by said phonograph after the reproduction of a recording for supplying one of said elements to said separating means, and individual means associated with said receptacles for controlling the playing of the corresponding individual recordings.

14. In a phonograph selector, in combination, switch means for putting the phonograph into operation, individual selector means movable from normal to actuated position and each determining individually the playing of a corresponding recording, a plurality of freely movable elements corresponding to individual recordings and each having individual sizes whereby the same may be separated from all other elements corresponding to other recordings, manually operable means for forming a series of said elements in desired order, a separator for separating said individual elements into a plurality of paths corresponding in number to the corresponding recordings, automatic means for transferring individual elements from said series and in the series order to said separator, means associated with each of said paths whereby the passage of an element therethrough effects the actuation of the corresponding selector member and closes said switch means, and means controlled by the phonograph after the reproduction of a recording for effecting the operation of said automatic means for supplying said elements to the separator whereby the said elements are supplied periodically to provide a continuous program.

15. In a phonograph selector, in combination, switch means for putting the phonograph into operation, individual selector means movable from normal to actuated position and each determining individually the playing of a corresponding recording, phonograph actuated means for returning said selector means to normal position, a plurality of freely movable elements corresponding to individual recordings and each having an individual size whereby the same may be separated from all other elements corresponding to other recordings, manually operable means for forming a series of said elements in desired order, a separator for separating said individual elements into a plurality of paths corresponding in number to the corresponding recordings, automatic means for transferring individual elements from said series and in the series order to said separator, means associated with each of said paths whereby the passage of an element therethrough effects the actuation of the corresponding selector member and closes said switch means, and means controlled by the phonograph after reproduction of a recording for effecting the operation of said automatic means for supplying said elements to said separator whereby said elements are supplied periodically to provide a continuous program.

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