Dec. 9, 1952 S. C. STEIN ET AL 2,621,042

AMUSEMENT BLOWING DEVICE

Filed Feb. 15, 1949

2 SHEETS—SHEET 1

Fig. 1.

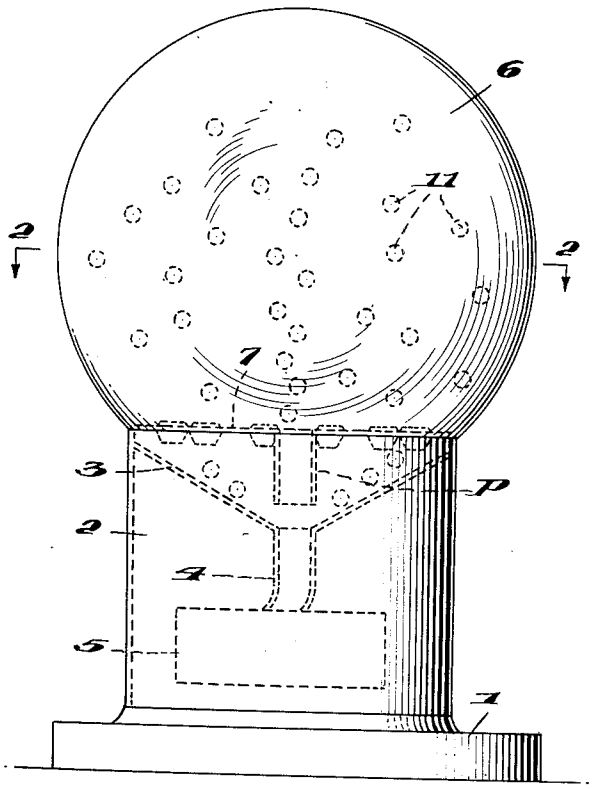


Fig. 3.

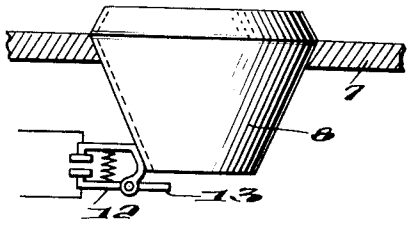


Fig. 4.

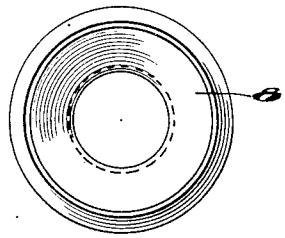


Fig. 5.

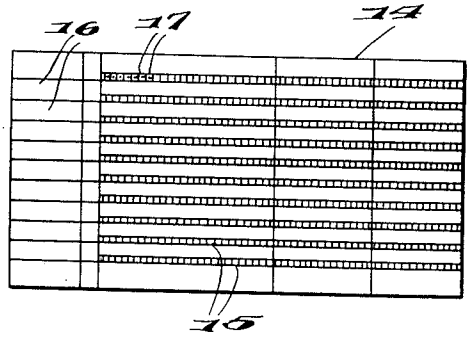
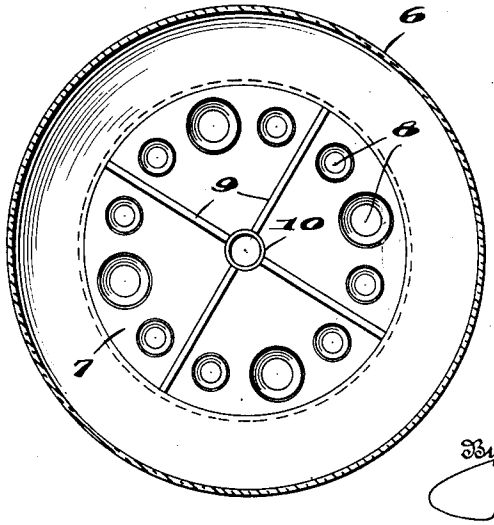


Fig. 2.



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2 SHEETS—SHEET 2

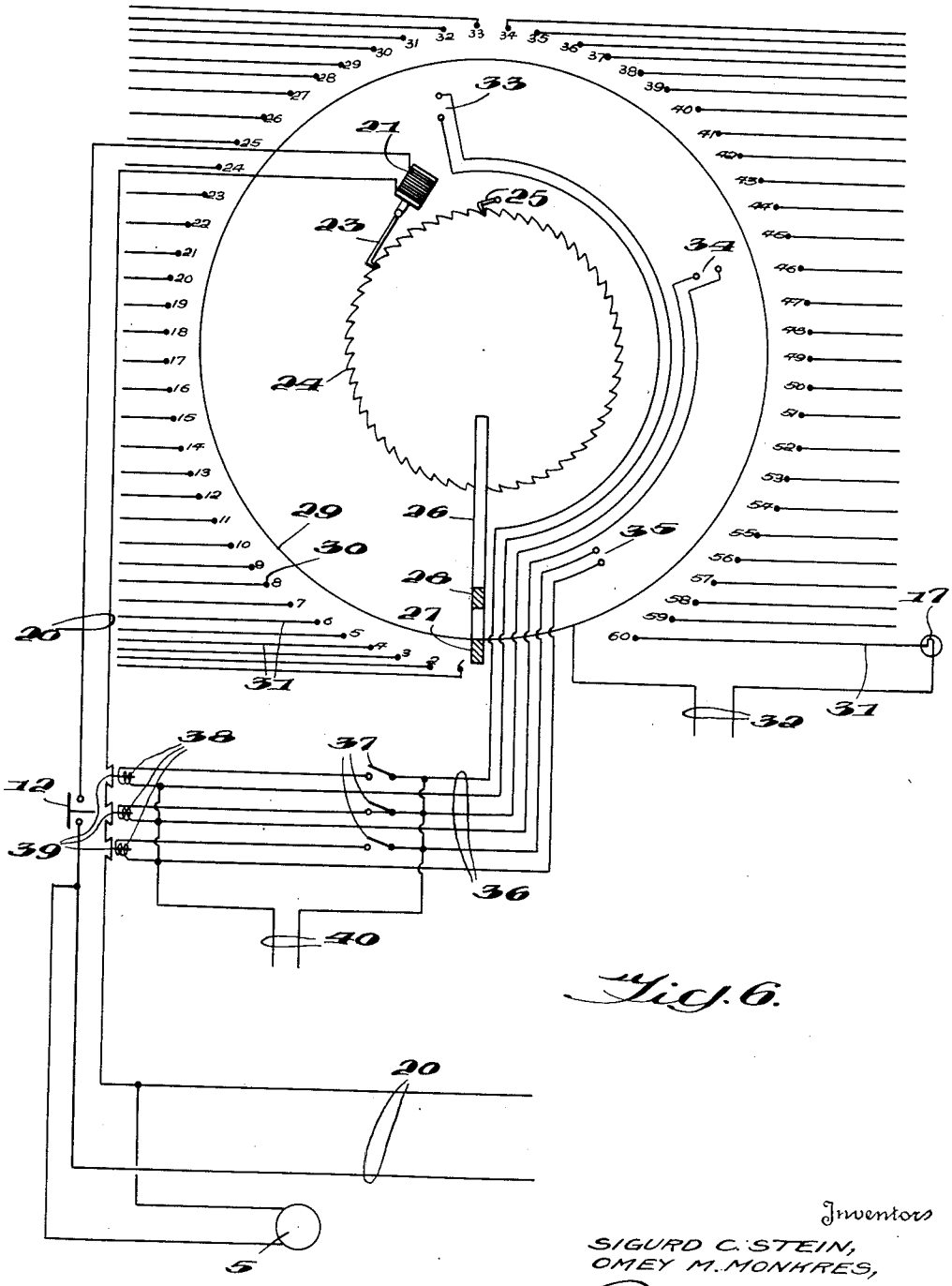


Fig. 6.

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2,621,042

AMUSEMENT BLOWING DEVICE

Sigurd C. Stein, Seattle, Wash., and Omey M. Monkres, Long Beach, Calif., assignors of twenty-five per cent to Dale H. Robinson, twelve and one-half per cent to Tom L. Letton, ten per cent to Everett Gouge, thirty-seven and one-half per cent to Omey M. Monkres, all of Long Beach, Calif., and fifteen per cent to Sigurd C. Stein, Seattle, Wash.

Application February 15, 1949, Serial No. 76,512

6 Claims. (Cl. 272—1)

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This invention relates to improvements in game devices and more particularly to devices adapted for amusement.

An object of the invention is to improve the construction and operation of game devices to produce unusual effects therefrom which are highly entertaining for amusement purposes.

These objects may be accomplished according to one embodiment of the invention by the provision of an annunciator board simulating an actual race track with provision for indicating the progress of the respective races. This annunciator board preferably is provided with electrical connections to show the action thereof and may be secured to a wall of a building or room in an upstanding position on a table or other support or in such other location as will be convenient for the entertainment and amusement of the players. Provision may be made for seating of the players in convenient relation to the board or other operating device associated therewith.

This operating device, according to this embodiment, is in the form of a large globe containing a plurality of small objects, such as balls, which are circulated therein by compressed air or other fluid. Each of the balls or floating objects is designed for actuation of a control switch during the movement thereof through or from the globe. It is preferred that funnels be provided in the bottom of the globe through which the balls are distributed therefrom and a suitable switch is mounted on each of the funnels for momentary tripping thereof by the ball passing therethrough. This temporarily closes a circuit to the annunciator board and indicates therein the progress of the race. Provision may be made for continuous recirculation of the balls through the globe. An interest is increased in the game thereby and in seeing these continually operating.

It is preferred that one funnel be provided for each race course on the annunciator board, one of which may be selected by each player. If it is not desired to use all of the race courses at one game, any suitable number of the funnels may be closed or plugged against operation or may be disregarded. This embodiment of the invention is illustrated in the accompanying drawings, in which—

Fig. 1 is a side elevation of the operating device.

Fig. 2 is a cross section therethrough on the line 2—2 in Fig. 1.

Fig. 3 is a detail cross section partly in elevation, showing the mounting of one of the funnels in the globe.

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Fig. 4 is a top plan view thereof.

Fig. 5 is a plan view of the annunciator board.

Fig. 6 is a diagrammatic view showing the electrical connections of the annunciator device.

Referring to Figs. 1 to 4, the operating device is shown in one embodiment as including a base 1 having an upstanding surrounding housing 2 mounted thereon, open at the top, and having a hopper 3 in the upper portion of the housing. The bottom of the hopper 3 is connected in open communication with a duct or tube 4, which in turn is connected with a blower 5, such as an electrically operated fan adapted to blow air under pressure through the duct or tube 4 into the bottom of the hopper 3. This fan 5 may have a suitable connection through a side of the housing 2 with the atmosphere or with the interior of the globe, hereinafter described, for circulating the air.

A globe is shown at 6 having an open bottom seated upon the top of the housing 2 and detachable therefrom. This is preferably a transparent globe formed of glass or plastic or other suitable material so as to enable observation of the action that takes place therein. The open bottom of the globe preferably is not sealed with respect to the top of the housing 2 so as to allow air passage therebetween, or it should be connected with the fan 5, as mentioned above.

A cover plate 7 extends over the upper portion of the housing 2 at the open end of the globe 6, being suitably mounted in place either permanently or removably, as desired. Mounted in the cover plate 7 are a plurality of funnels 8 which serve as ball pockets and preferably are tapered and open at the top and bottom for passage of the balls or other objects therethrough. These funnels or pockets 8 may be made of uniform size or of different sizes, if desired, to produce added interest and amusement in the game. They may be separated, if desired, by partitions or division plates 9, generally shown in Fig. 2. Centrally of the plate 7 is an air tube 10 open therethrough for the passage of balls or other missiles, generally indicated at 11, under the action of the compresed air forced upward through the tubes 4 and 10 by the fan or blower 5. The balls 11 preferably are light weight hollow balls which may be blown upward freely by compressed air through the globe 6 for downward passage through the funnels 8 and yet have sufficient weight for freedom of rolling movement therethrough.

Connected with each of the funnels 8 is a switch or circuit closing device generally indicated at 12, having a spring or contact member 13 extending into the path of the balls 11 passing through each of the funnels 8. Any suitable form of contact member may be used, as desired, and preferably is mounted on a side of the funnel 8 but in such position as to be actuated by the balls passing therethrough.

An annunciator board is shown generally at 14 in Fig. 5. While any suitable construction may be used, as desired, the board 14 is shown as having a plurality of track courses 15, each of which may correspond, respectively, with a particular race course and may have suitable designations on the indicator spaces 16 of the names or other indicia for the respective horses on the courses. Each of the race courses 15 may be formed of a series of illuminated areas having transparent covers with illuminating lamps 17 therebelow adapted for successive illumination to indicate the extent of the race on such course. The names of particular horses may be applied in the marking spaces 16 which may be announced on a loud speaker, together with the announcement of each race, the winners, odds on the respective horses, and subsequently the names of the horses to be run on the next race. Suitable provision may be made for changing the names thereon as by providing an eraseable surface or detachable indicia cards or the like. The distance of each race may be changed as indicated on the respective portions of the annunciator board 14 as from two, four or six furlongs. When it is not desired to use all of the horses in any particular game, the corresponding funnels 8 may be plugged or otherwise destroyed.

As the balls 11 are circulated in the globe 6 and pass, respectively, through the funnels 8, circuits are closed at the switches 12, one with each of the race courses 15 to indicate by the successive energizing of the lamps 17 of the respective courses the progress of the horses along the courses. The balls 11 are continually circulated by compressed air forced upward through the tubes 4 and 10, passing upward through the center of the globe 6 and down near the outer side where the funnels 8 are located, preferably one funnel for each horse and for each race course. The funnels may be of various sizes, thus facilitating the passing of the balls therethrough and thereby determining the odds of the game. As the balls roll through the funnels and are directed to the hopper 3 toward the center thereof, they are caught by a current of compressed air which directs them up again through the tube 10 and through the globe 6, thus keeping them in continuous motion. When a ball passes through a funnel, the circuit is closed at 12 to advance the corresponding horse one place along the race course 15 by the illumination of the next successive lamp 17 of that course until the game is completed by one of the horses reaching the finish line of the particular race.

The step-by-step advancing of the horses along the tracks through the successive illumination of the lamps 17 of the corresponding course 15 may be accomplished, according to one embodiment, by the electrical apparatus illustrated in Fig. 6.

The electrical switch shown in Fig. 6 is adapted to be used for each of the respective race courses, one for each course. Each of these switches is adapted to be actuated by a different funnel 8. The switch 12 for the corresponding funnel 8 is connected in a power circuit 20 in series with

a solenoid 21. The power line circuit 20 is shown also as connected with the agitator motor of the fan 5. The series of step-by-step switches similar to those shown in Fig. 6 may be connected in parallel with each other for independent respective operation, although jointly controlled in a manner well understood in the art.

The solenoid 21 has a ratchet arm 23 connected to the armature thereof in position to engage a ratchet wheel 24 that is provided with a holding pawl 25 to prevent reverse rotation thereof. Fixed to the ratchet wheel 24 is a contactor arm 26 which carries contact bars 27 and 28, respectively, separated and insulated from each other and from the arm, but each of which is constructed of electrical conducting material. The arm 26 is moved step-by-step around the center of the ratchet wheel 24 by the successive energizing of the solenoid 21.

One side of the contact bar 27 bears upon a circular continuous contact 29, while the opposite side of said bar is in position for wiping engagement successively with contacts 30 spaced circumferentially, as shown in Fig. 6, and corresponding in number with the successive positions along each of the race courses 15. The contacts 30 are connected through lines 31 with the lamps 17. A source of electrical supply, generally indicated at 32, is connected at one side with the circular contact 29 and at the opposite side with all of the lamps 17, so that upon engagement of the contact bar 27 with any of the contacts 30, the circuit will be completed through the bar between the contacts 29 and 30 and through the corresponding lamp 17 to energize the latter.

A series of place switches are shown at 33, 34 and 35, respectively, disposed in position to indicate successive positions along the track, as for four, six or eight furlongs. Each of the switches 33, 34 and 35 comprises electrical contacts in position to be engaged in bridging relation by the contact bar 28 when the arm 26 reaches a corresponding position of movement through the circle. The contacts of the switches 33, 34 and 35 are connected in circuits 36, each having a manually controlled switch 37 and including a solenoid 38. The solenoids 38 control switches 39 connected in series in the power line circuit 20 so that when energizing any one of the solenoids 21 the corresponding switch will be opened, thus breaking the circuit to the solenoid 21. A source of electrical supply 40 is connected with the circuits 36 to energize the solenoids 38 upon closing of the respectively corresponding switches 33, 34 or 35 and the switch 37 therein.

The step-by-step contact switch shown in Fig. 6 is described merely for purpose of illustration and may be changed, if found desirable.

As the balls 11 are blown up through the globe 6, as described above, and dropped down through the respective funnels 8, they strike the contacts 13 of the switches 12. This causes a momentary closing of the circuit 20 to the solenoid 21, energizing the latter to attract the pawl 23 and move it through the spacing of one tooth on the ratchet wheel 24, thereby rotating the ratchet wheel a corresponding amount. This moves the contact arm 26 and contact bar 27 the space of one tooth into engagement with contact No. 1 on the 60 position switch indicated, thereby completing a circuit through one side of the power line 32 to the circular contact 29, the contact bar 27, contact 30 engaged thereby, line 31, lamp 17, and opposite side of the power line 32, thereby energizing the lamp in the first position of the corre-

sponding race course or track. The next ball that falls through the same funnel 8 will again close the contact switch 12 to energize the solenoid 21 and move the ratchet wheel 24 to the next position. This continues successively for each of the track courses until one of these completes the circuit to the corresponding switches 33—35 which are connected in parallel for all of the courses, according to which of the switches 37 is closed. Then the solenoids 33 are energized to break the parallel lines 20 to all of the solenoids 21, stopping the game. After the completion of the game, provision should be made for resetting all of the ratchet wheels 24 to zero positions, which may be done by manual rotation thereof by the operator.

While the invention has been illustrated and described in one embodiment, it is recognized that variations and changes may be made therein without departing from the invention, except as specified in the claims. Moreover, the operating device may be used alone, if desired, as an amusement device, or with other forms of annunciators, with highly entertaining results.

We claim:

1. An amusement device comprising a hollow chamber including a horizontal bottom plate, a plurality of funnels mounted in the bottom plate of the chamber having openings therethrough, a hopper beneath the funnels, a plurality of air-borne members in the chamber, and means for forcing air upwardly in the chamber to circulate the floatable members therein and allow dropping thereof through the funnels.

2. An amusement device comprising a hollow chamber including a horizontal bottom plate, a plurality of balls confined in the chamber, a plurality of funnels at the bottom plate of the chamber having openings therethrough for downward movement of the balls from the chamber, a hopper beneath the funnels in position to receive the balls therefrom, and means for forcing air upward through the hopper into the chamber for circulating the balls therein.

3. An amusement device comprising a hollow globe, a plurality of air-borne balls in the globe, a horizontal bottom for the globe, a plurality of funnels mounted in the bottom plate and having openings therethrough for downward passage of the balls from the chamber, a hopper beneath the bottom plate in position to receive the balls from the funnels, and means for circulating air upward through the hopper and chamber for circulating the balls therein.

4. An amusement device comprising a hollow globe, a plurality of air-borne balls in the globe, a horizontal bottom plate for the globe, a plurality of funnels mounted in the bottom plate and having openings therethrough for downward passage of the balls from the chamber, a hopper beneath the bottom plate in position to receive the balls from the funnels, said bottom plate having an opening therethrough, and means connected with the bottom plate of the hopper for circulating air upward through said opening to re-circulate the balls in the globe from the hopper.

5. An amusement device comprising a base having an upstanding surrounding housing, a hollow globe detachably mounted on the housing, a partition closing the bottom of the globe and mounted at the top of the housing and having a central opening therein, a plurality of air-borne balls in the globe, a plurality of funnels mounted in the partition and having downward openings therethrough in position for passage of the balls through the funnels, a hopper mounted in the housing beneath the funnels in position to receive the balls therefrom, said hopper having a central opening with downwardly directed sides for movement of the balls to said central opening by gravity, and air pressure means connected with the central opening of the hopper for directing air through and into the globe to re-circulate the balls therein.

6. An amusement device comprising a base having an upstanding surrounding housing, a hollow globe detachably mounted on the housing, a partition closing the bottom of the globe and mounted at the top of said housing and having a central opening therein, a plurality of air-borne balls in the globe, a plurality of funnels mounted in the partition and having downward openings therethrough for passage of the balls through the funnels, a hopper mounted on the housing with the funnels in position to receive the balls therefrom, said hopper having a central opening with downwardly directed sides for movement of the balls to the central opening by gravity, a plurality of vertically extending plates on said partition, said plates extending radially from the central opening, and air pressure means connected with the central opening of the hopper for directing air through said central openings into the globe to recirculate the balls therein.

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