

July 24, 1928.

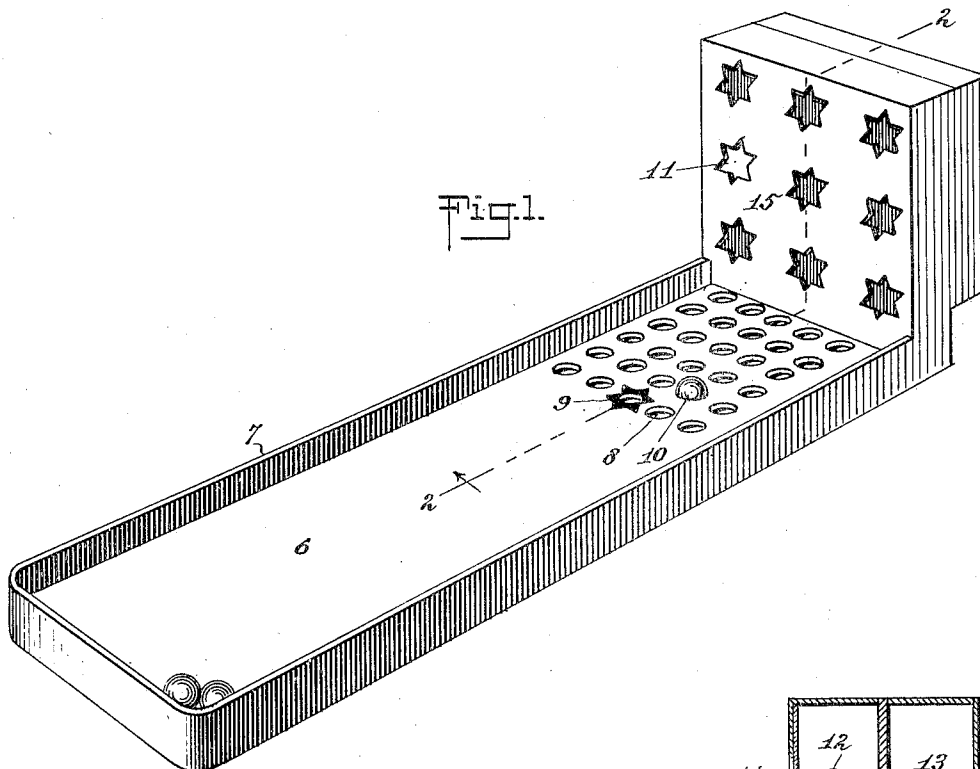
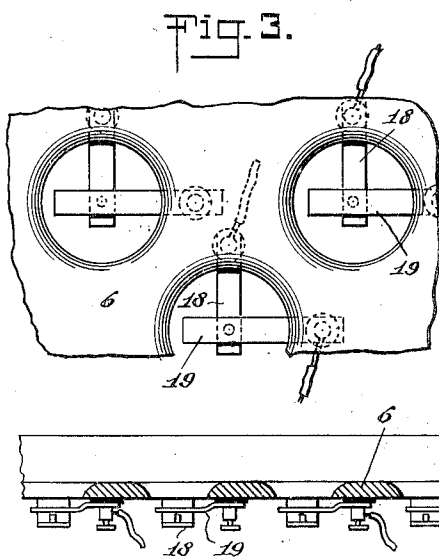
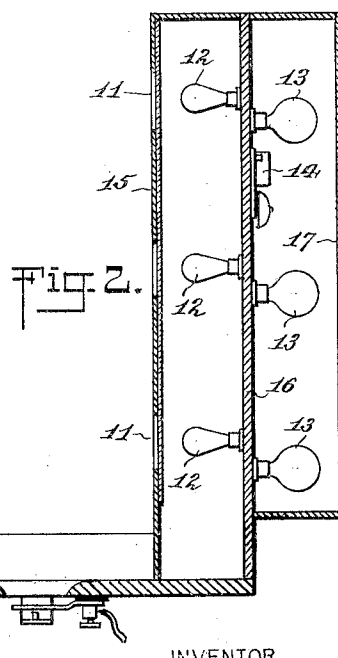
1,678,573

Y. NAKASHIMA

AMUSEMENT DEVICE

Filed Sept. 24, 1927

2 Sheets-Sheet 1



WITNESSES

William S. Gaebele
Charles A. Norton

INVENTOR

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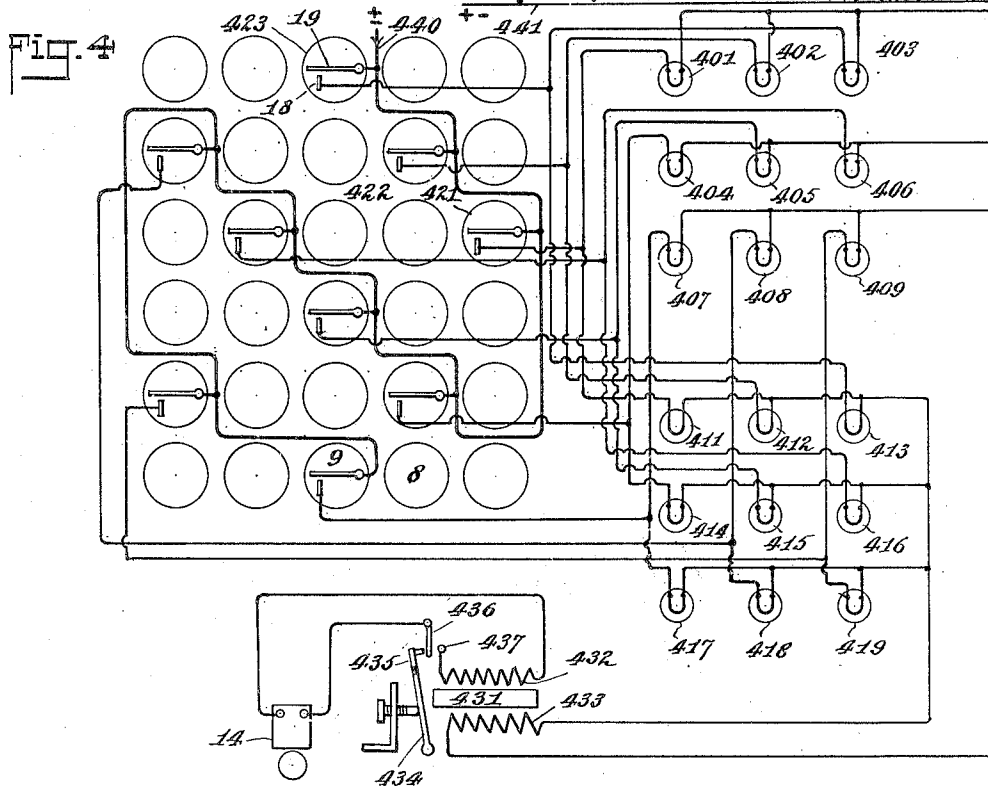
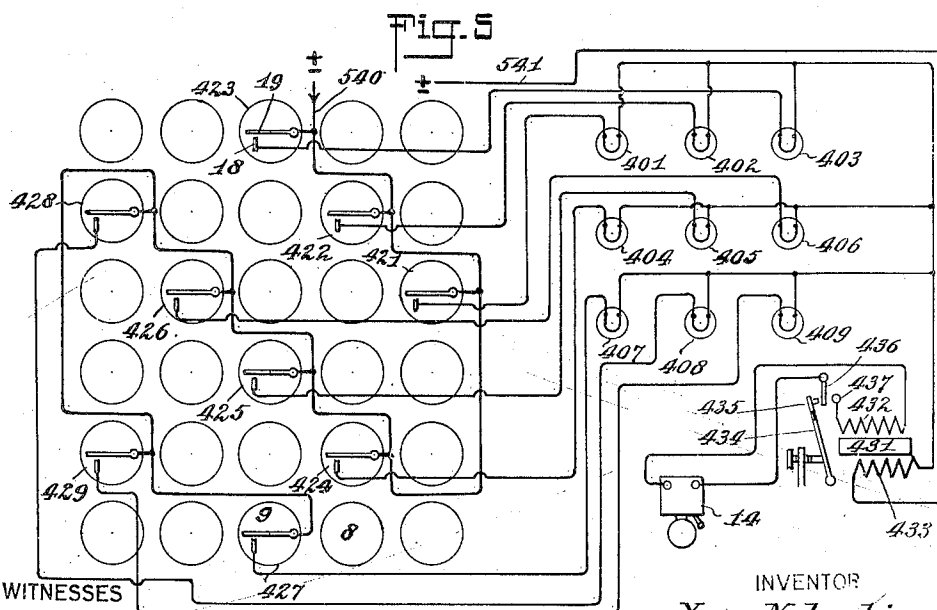
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AMUSEMENT DEVICE

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2 Sheets-Sheet 2



WITNESSES

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Patented July 24, 1928.

1,678,573

UNITED STATES PATENT OFFICE.

YOZO NAKASHIMA, OF BROOKLYN, NEW YORK.

AMUSEMENT DEVICE.

Application filed September 24, 1927. Serial No. 231,828.

This invention relates to new and useful improvements in amusement devices.

One object of this invention is an improved amusement device adapted to signal the attendant and the player when the latter succeeds in making a winning play.

Another object is an improved amusement device adapted to differentiate between different winning plays which entitle the player to receive different prizes.

In accordance with this invention the amusement apparatus consists of a table or other device provided with a plurality of receptacles. The player seeks to roll the ball or other object of play into certain distinctively marked receptacles in the group, in an endeavor to make a prize-winning play. Those receptacles which constitute prize-winning plays, in addition to being visibly differentiated from the remaining receptacles are also furnished with signal contacts, each contact controlling, over a suitable electric circuit, a visible signal indicator which operates when the ball lodges in the receptacle with which the signal contact is associated, thus serving to indicate to both the player and the attendant that a prize-winning play has been made. The invention further contemplates that whenever the player succeeds in making a play or a series of plays entitling him to a grand prize a further and additional signal will operate, which will indicate to both the player and the attendant that the player is entitled to a grand prize.

In the drawings, comprising two sheets, Figs. 1 to 5 inclusive,

Fig. 1 is a view in perspective of the amusement device or playing table;

Fig. 2 is a sectional view along the line 2-2 of Fig. 1;

Fig. 3 is a detailed plan view of a portion of the playing table and the signal contacts associated with receptacles therein;

Fig. 4 is a schematic drawing of one form of circuit network used in the signal system; and

Figure 5 is a schematic drawing of an alternative form of circuit network which may be used in the signal system in place of the network of Fig. 4.

Like reference characters designate like parts throughout the several figures.

The device consists of a playing table which is preferably provided with a wall secured to the sides thereof. At one end of

the table a series of receptacles or pockets is provided, such as are indicated at 8 and 9 of Fig. 1. The player stands at the front end of the table, that is, at the end remote from the receptacles, and is provided with a plurality of playing objects, which in the present case consist of balls such as are indicated at 10 in Fig. 1. The balls are of such dimensions that each of them is adapted to rest in any receptacle without passing therethrough, as is best indicated by the ball 10 of Fig. 1.

A certain number of receptacles are selected as prize-winning receptacles and are differentiated from the remainder by suitable marking. The applicant usually designates the prize-winning receptacles by means of stars and terms them "star numbers". Each prize-winning receptacle or star number is provided with a pair of contacts 18 and 19, best indicated in Figs. 2 and 3. These contacts are so arranged that they are normally separated, but whenever the ball 10 rests in a prize-winning receptacle the weight of the ball 10 is sufficient to bring the spring 19 into physical contact with the contact member 18. Whenever the ball 10 is removed from the receptacle the natural resilience of the spring 19 causes it to break physical contact with the contact member 18.

As best indicated in Figs. 4 and 5, one group of contact springs (in the drawings, the contact members 19), are all strapped together by a suitable strap wire, and the other contact members (in the present instance the contact members 18), are connected by individual leads to a series of lamps, there being one lamp associated with and peculiar to each prize-winning receptacle. One side of each lamp is connected to a suitable strap wire leading to a source of electric current supply. Thus, whenever a pair of contact members 18 and 19 are closed by the weight of the ball 10 an electric circuit will be closed to illuminate one of the lamps and the associated star, thereby indicating to both the attendant and the player that the latter has succeeded in rolling the ball into a prize-winning receptacle.

The lamps 401 to 409 inclusive (Figs. 4 and 5), are arranged in a cabinet consisting of a partition 16 and screen 15 perforated as at 11 (Figs. 1 and 2), by star-shaped apertures through which the illuminated lamp is adapted to display a star-shaped symbol or emblem. The cabinet is best indi-

cated in Figs. 1 and 2. In addition to the signal lamps 401 to 409, which are indicated in Fig. 2 by the reference character 12, a second series of lamps 411 to 419 (Fig. 4), are also sometimes used. This latter group of lamps is indicated by the reference character 13 in Fig. 2. When the second group of lamps is used they may, if preferred, be mounted upon the opposite side of the partition 16, as indicated in Fig. 2, and a suitable cover member 17 may be placed thereover to form a second cabinet, which serves to protect the lamps from damage. Mounted either in or adjacent to either one of the cabinets is an audible signal 14 which may consist of a bell, buzzer, or any other preferred form of audible signalling means. A relay 431 (Figs. 4 and 5), is also mounted either in or adjacent to one of the cabinets. The relay 431 serves to control the operation of the audible signal 14 as hereinafter more fully described.

The general operation of the device is as follows:

The player is supplied with a plurality of objects which are ordinarily sponge rubber balls of the character of the ball 10 (Figs. 1 and 2). The player proceeds to roll the balls over the table, in an attempt to lodge them in prize-winning receptacles or star numbers, as at 9 (Fig. 1). Whenever the player is successful in so doing the contact members 18 and 19 associated with said prize-winning receptacles are closed and one of the lamps 12 (Fig. 2) will be illuminated. Referring to Fig. 5, we will assume that the ball has lodged in the receptacle numbered 423, in which event lamp 403 will be illuminated over the following circuit: from a source of current supply, which may be either alternating current or direct current (which in the drawings is assumed to be alternating current), over the lead 540, contacts 19 and 18 of receptacle 423, filament of the lamp 403, winding 433 of the relay 431, lead 541, to the other side of the source of current supply. The lamp 403 is accordingly lighted. Although the current is now flowing through the winding 433 of the relay 431 the relay will not be operated, as it is given a marginal adjustment. This marginal adjustment is of such a character that the armature 434 of relay 431 will only be operated to close the contacts 435, 436 and 437 when the player has succeeded in lodging all of the played objects or balls 10 with which he is furnished, in prize-winning receptacles or star numbers. Ordinarily, the player is furnished with three balls; consequently, in order to operate the relay 431 it is necessary for him to lodge all three of the balls in prize-winning receptacles. If he succeeds in lodging only one or two of the balls in prize-winning receptacles the relay 431 will not operate, although two of the lamps (401

to 409 inclusive), will be eliminated. Whenever the player succeeds in lodging all three of the balls in prize-winning receptacles or star numbers three of the lamps of the group 401 to 409 inclusive will be illuminated and the relay 431 will attract its armature 434, thereby closing the contact members 435, 436 and 437, to close a local circuit, including the buzzer, and another winding 432 of relay 431, which is arranged in inductive relation with the winding 433 of the relay.

As heretofore set forth, and as indicated in the drawings, the applicant contemplates that ordinarily the source of current supply will be alternating current, in which event the current flowing in the winding 433 of the relay will, whenever the armature 434 is attracted and contacts 435, 436 and 437 are closed, induce a current of like characteristics in the secondary winding 432 of the relay, which current will furnish sufficient power to operate the audible signal 14.

It should be understood however, that if direct current is employed in place of alternating current the winding 432 may be disconnected and a circuit to operate the audible signal 14 may be provided which will include one side of the source of current supply, the winding of the audible signal 14, contact 436, thence, by way of contact 437 to the other side of the source of current supply.

Under some conditions it may be deemed desirable to increase the marginal range of the relay 431. When this is desirable a second group of lamps (411 to 419, see Fig. 4), may be employed. These lamps are connected with lamps 401 to 409 inclusive, respectively, lamp 411 being in multiple with lamp 401; lamp 412 being in multiple with lamp 402, etc. With this arrangement, whenever one of the lamps 401 to 409 is illuminated, one of the lamps 411 to 419 also receives a substantial current flow, which may or may not illuminate said lamp. As these lamps, however, which are best indicated at 13 in Figure 2, are merely resistance lamps, it is not material that they should be fully illuminated, or that they should be illuminated at all. It is obvious, however, that by placing resistance lamps (of the character of the lamps 13, Fig. 2) in multiple with the lamps 401 to 409 inclusive, the variation in resistance in the lamp network is considerably increased, resulting in an increase in variation in the current flowing in the network when the lamps 13 are employed, so that the operating margins of the relay 431 will be more widely separated, that is, it will require considerably more current to operate it when two or more sets of lamps (12 and 13—Figs. 2 and 4) are employed, than when only one set of lamps is employed.

The armature 434 of relay 431 is quite

massive and is provided with a suitable adjusting screw by means whereof the position of the armature 434 with respect to the core of the relay 431 may be varied at will.

5 What is claimed is:—

1. In an amusement apparatus a playing table, recesses in the table comprising a target for a played ball, certain of the recesses visibly distinguishable from the remainder being designated as prize-winning recesses, each prize-winning recess being provided with a contact which is adapted to be closed when a ball is positioned in the recess, a plurality of signals operable to display a visible positive signal, there being as many signals as there are prize-winning recesses, a plurality of circuits, each circuit comprising one contact and one visible signal, a relay operable when a plurality of visible signals are positively displayed but non-operable when a single visible signal is positively displayed, a circuit common to the relay and all of the visible signals, and an audible signal operable under control of the relay.
2. In an amusement apparatus and in

combination, a playing table, recesses therein comprising a target for a played ball, certain of said recesses visibly distinguishable from the remainder being designated as prize winning recesses, each prize winning recess being provided with a circuit closing contact, a series of lamps, there being one lamp peculiar to each prize winning recess, a plurality of circuits, each circuit comprising one lamp and one circuit closer, each circuit closer being operable responsive to the positioning of a ball in its associated recess to close the circuit to light its associated lamp as a positive signal, a marginal device common to all of said circuits, said device being non-operable when a single lamp is lighted but operable when a predetermined number of lamps are lighted, an electro-responsive audible signal, and a circuit therefor closed by the operation of said marginal device.

Signed at New York city, in the county of New York and State of New York, this 19th day of September, A. D. 1927.

YOZO NAKASHIMA.