Feb. 1, 1938. F. E. PAVELKA 2,107,211

GAME APPARATUS

Filed March 25, 1935 3 Sheets-Sheet 1

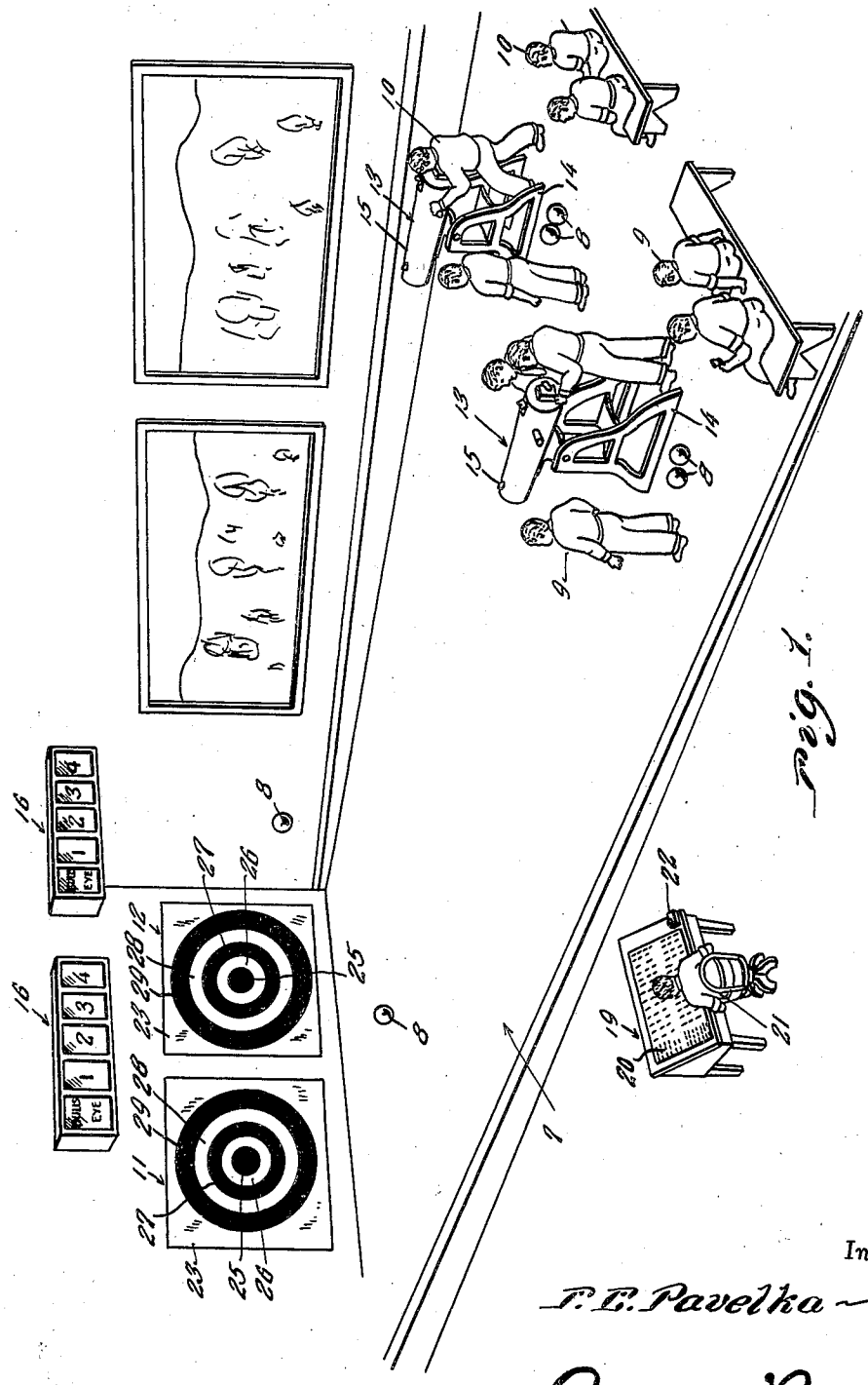


Fig. 1.

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GAME APPARATUS

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Fig. 4.

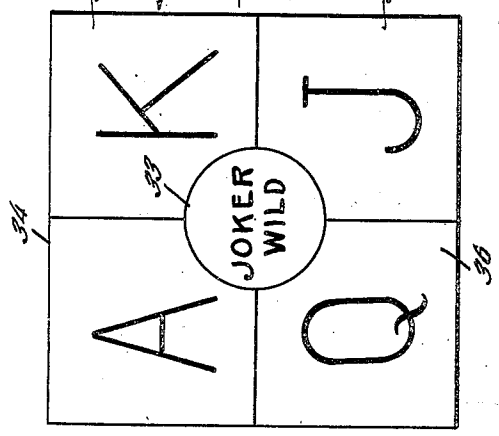


Fig. 3.

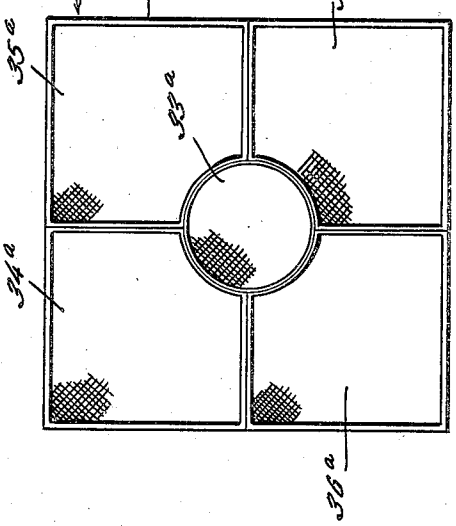


Fig. 5.

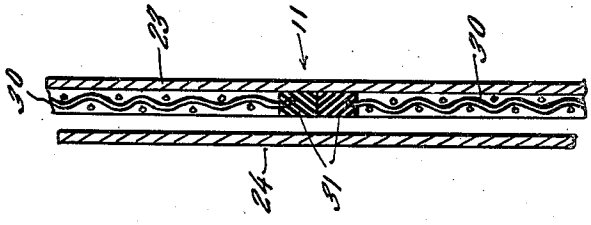
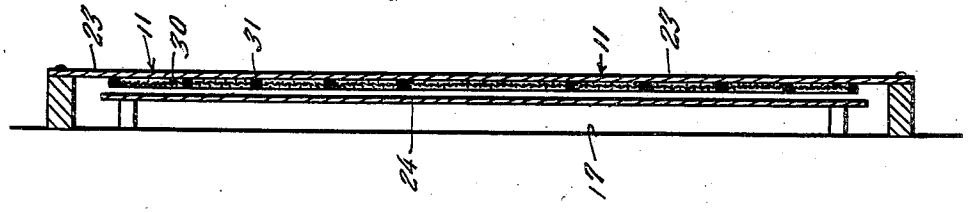


Fig. 2.



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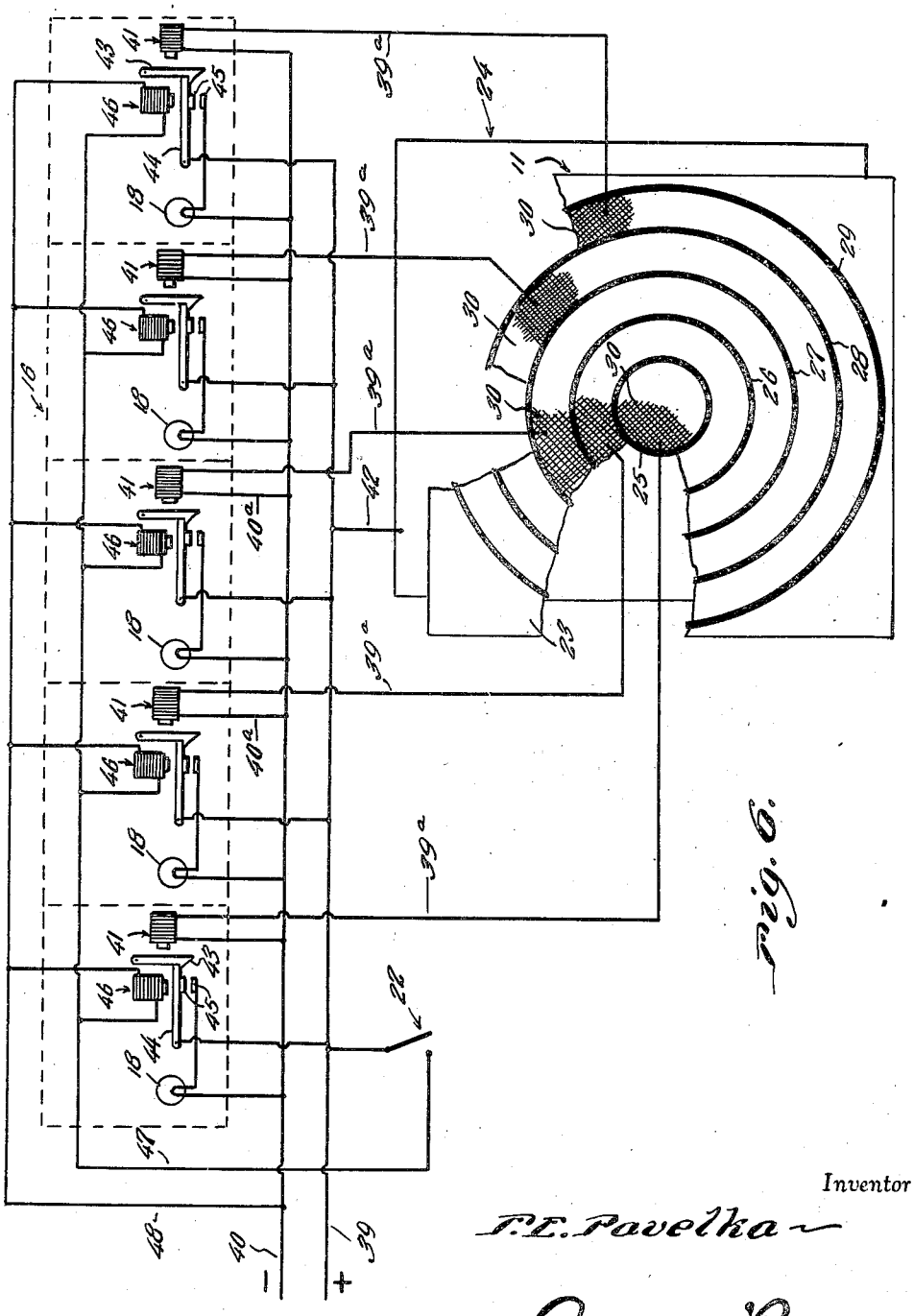


Fig. 9.

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UNITED STATES PATENT OFFICE

2,107,211

GAME APPARATUS

Frank E. Pavelka, San Antonio, Tex.

Application March 25, 1935, Serial No. 12,969

2 Claims. (Cl. 273—102)

This invention has reference to a novel electro-mechanical game apparatus of a character and style susceptible of use in various lines of mechanical endeavor and especially practicable for installation in public places of amusement such as for example, bowling alleys, shooting galleries, golf ball driving ranges and the like.

The preferred embodiment of the invention comprehends the adoption and use of a particular assemblage of parts which for the purpose of explanation and illustration is satisfactorily usable in a bowling alley or similar pastime area, it being understood, of course, that the principle of the invention is adaptable in many other sports lines.

In the hope of providing a game structure which is thoroughly practical, up-to-date, and otherwise aptly fitted for the purposes intended, I have provided an arrangement, which I believe, is an unequalled achievement in the field of invention to which it relates, the same being characterized by unique and exclusive mechanical and electrical distinguishing features, and such additional phases as will serve as an indispensable method of testing the skill of the participants and in promoting good fellowship and enduring pleasure.

Briefly, the preferred embodiment of the invention contemplates the use of one or more targets located at one end of an alley, a cannon at the opposite end of said alley, said cannon to be utilized by competing teams, and constructed for projecting balls or the like in the direction of the target.

Although no particular novelty is claimed to reside in the floor construction of the alley or equivalent construction, or in the means for casting the projectiles, it is anticipated that novelty is predicated upon the particular construction of the target, and more particularly upon the visible signalling means for positively indicating the points made during the process of playing the game and scoring.

When reduced to actual practice, the assemblage contemplates the adaptation and use of distinguishable electric bulbs, electrically coordinated with complemental features of the target, the bulbs to be illuminated individually as predetermined sectors of the target are struck, and thereafter extinguished by an impartial scoring attendant or judge, whereby to permit the points to be charted and tallied to promote fair play for all concerned.

Numerous other features and advantages will become more readily apparent from the following description and drawings.

In the accompanying drawings wherein like numerals are employed to designate the corresponding parts throughout the views:

Figure 1 is a diagrammatic perspective illustration of the preferred embodiment of the invention constructed in accordance with my idea and disclosing in a general way the manner in which the game is played.

Figure 2 is a vertical sectional view through the target.

Figure 3 is an enlarged fragmentary sectional view disclosing the circuit make and break means in detail.

Figure 4 is a front elevational view of a slightly different style or embodiment in the target construction utilizing, instead of a bull's eye, a card game poker hand.

Figure 5 is a front view of the type of screen which is used behind and in association with the target shown in Figure 4.

Figure 6 illustrates the wiring diagram and allocated parts of the electrical circuit make and break means of the target.

By way of introduction, it is to be pointed out that the description will refer first to the mechanical phases and aspects of the invention. Indirect mention will of course be made to parts of the electrical means, but this will be described specifically later on in the descriptive matter.

Attention is first invited to Figure 1 which shows the indoor type of game apparatus and here the alley is denoted by the numeral 7. This may be of appropriate floor construction and suitably inclined and otherwise developed to handle the projectiles or balls 8 with requisite expediency. That is to say, appropriate ball return means (not shown) and other appurtenances will obviously be utilized. The players of the respective competing teams are distinguished by the numerals 9 and 10 and they take their positions at the "firing line" or starting point. Incidentally, the firing line will be regulated depending on the relative skill of the participants of the respective teams. That is to say, suitable rules and regulations for handicapping, etc., will be invoked in playing the game. The targets at the opposite end at which the balls 8 are directed are represented by the numerals 11 and 12. There is one target for each team and the targets are of duplicate construction. The balls are hurled or projected by appropriate instruments or devices. I have found it satisfactory and practicable to employ portable cannons 13 for

the purpose. Each cannon includes a base or stand **14** and an adjustably mounted cannon **15**. It is immaterial whether the cannons be spring operated, pneumatically operated or otherwise constructed. The idea is to provide means for shooting the balls **8** and to allot a predetermined number of balls to each player and to allow the players and teams to shoot in predetermined order in accordance with the agreed rules and regulations.

The numerals **16** denote lamp boxes. These are attached to the wall **17** adjacent, and preferably above, the respective targets. Broadly, these lamp boxes are hereinafter referred to as visible indicating or signalling means. They are of suitable construction and include properly marked windows associated with individual compartments to accommodate the electric bulbs **18**. The bulbs are suitably mounted and are individually illuminated according to the particular sector of the target struck by the projectile or ball **8**.

The numeral **19** designates a desk designed to accommodate a scoring pad **20** under the supervision and control of the judge or scoring attendant **21**. He has at his disposal a control switch **22** for extinguishing the bulbs individually or collectively as the case may be.

A description of one target will suffice for both. Referring for example to Figure 2, it will be observed that the target proper comprises a sheet of canvas or equivalent material **23** mounted in spaced parallelism with respect to the wall **17**. The numeral **24** designates a back stop which is here shown in the form of a metallic plate designed to conduct electricity. This is the stationary contact of the electric circuit make and break means. The movable contact is in the form of a screen which, as a unit, is suitably attached to the back of the canvas, that is interposed between the canvas and plate **24**. The canvas is painted or otherwise fashioned to include distinguishable sectors designed to be struck by the balls **8**. This is referred to as a unit under the heading of a bull's eye. The sectors include a central disk **25**, a surrounding white band **26**, a concentric surrounding black band **27**, an outer white band **28** and a marginal outer black band **29**. These are obviously the individual marks to be shot at by the players. The circuit closing screen is made up of annular sections **30** of the type shown in Figure 3, there being a section aligned with each of the features **25** to **29** inclusive. The screen sections are insulated from one another by insulating rings **31**. It is thus evident that when suitable wiring means, to be hereinafter described, is embodied, whatever sector is struck by the ball serves to illuminate the particular bulb associated therewith. This bulb is in view of all, including the judge, thus giving the desired signal and constituting positive means for determining the scoring points made by the players.

As before stated, the invention may include all sorts of targets depending upon the nature of the game to be played. For example, I have shown a different embodiment of target in Figure 4, this being denoted by the numeral **32** and comprising a canvas divided into five sectors or areas **33**, **34**, **35**, **36** and **37**. These areas are denoted by indicia representing playing cards and in this arrangement it is the purpose to enable the players to attempt to make a dominating poker hand. It is needless to attempt to set forth the rules and regulations for playing this particular game since the principle is the same, but it is necessary to vary the construction of the particular screen **38** which is used in connection with this form of canvas. That is to say, the screen comprises individual compressible sections **33***a*, **34***a*, **35***a*, **36***a*, and **37***a* respectively. These are properly matched with coordinating sectors on the canvas in an obvious manner and the screen is used in conjunction with the aforementioned backing plate **24**.

In the wiring diagram illustrated in Figure 6, the method of operation of the lights and controlling is made evident. In this assembly there are two essential circuits, each including its respective electro-magnets. For example, the main wires **39** and **40** of the lighting circuit are joined by branch wires **39***a* and **40***a* to the magnets **41**. The wire **39** is also electrically connected as at **42** to the metallic plate **24**. When the circuit is closed by the action of the ball striking the target, this energizes one of the magnets **41**. In so doing, it attracts the trip **43**, allowing the switch lever **44** to drop down and engage the contact **45**. This obviously lights the lamp or bulb. The alternately usable magnets are denoted by the numerals **46** and these are under the control of the attendant **21** utilizing the light extinguishing switch **22**. The switch is electrically joined by the wires **47** and **48** and their branches, in series, to the magnets **46**. When any one of the magnets **46** is energized this breaks the lighting circuit by lifting the switch lever **41** upwardly in an obvious manner. Consequently, the signals are illuminated within clear vision of the players, depending on the particular shot made and then when each player or team is finished the attendant closes the switch **22** to energize the magnet **46** and extinguish the bulbs **18**. Thus, by this novel adaptation of individually controllable circuits and electric lamps, it is possible to play the game with requisite certainty and to insure accurate scoring by the impartial judge.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

Having thus described the invention, what is claimed as new is:

1. A target of the class described comprising a plate of electrical conducting material, a target member of nonconducting material disposed in spaced parallelism thereto, said target member being provided on its face with distinguishable objective sections, and an electrical conducting screen, comprising a plurality of annular and concentrically arranged sections on the back of said target member normally in spaced relation to said plate.

2. A target of the character described comprising a plate of electricity conductive material, a target member of non-conducting material disposed in spaced parallel relation with the said plate and provided on its face with distinguishable objective markings, an electrical conductive screen of sectional construction, said sections being yieldable toward and against the said plate, said target member being in the form of a sheet of flexible material which will yield against the screen under an impact.

FRANK E. PAVELKA.