

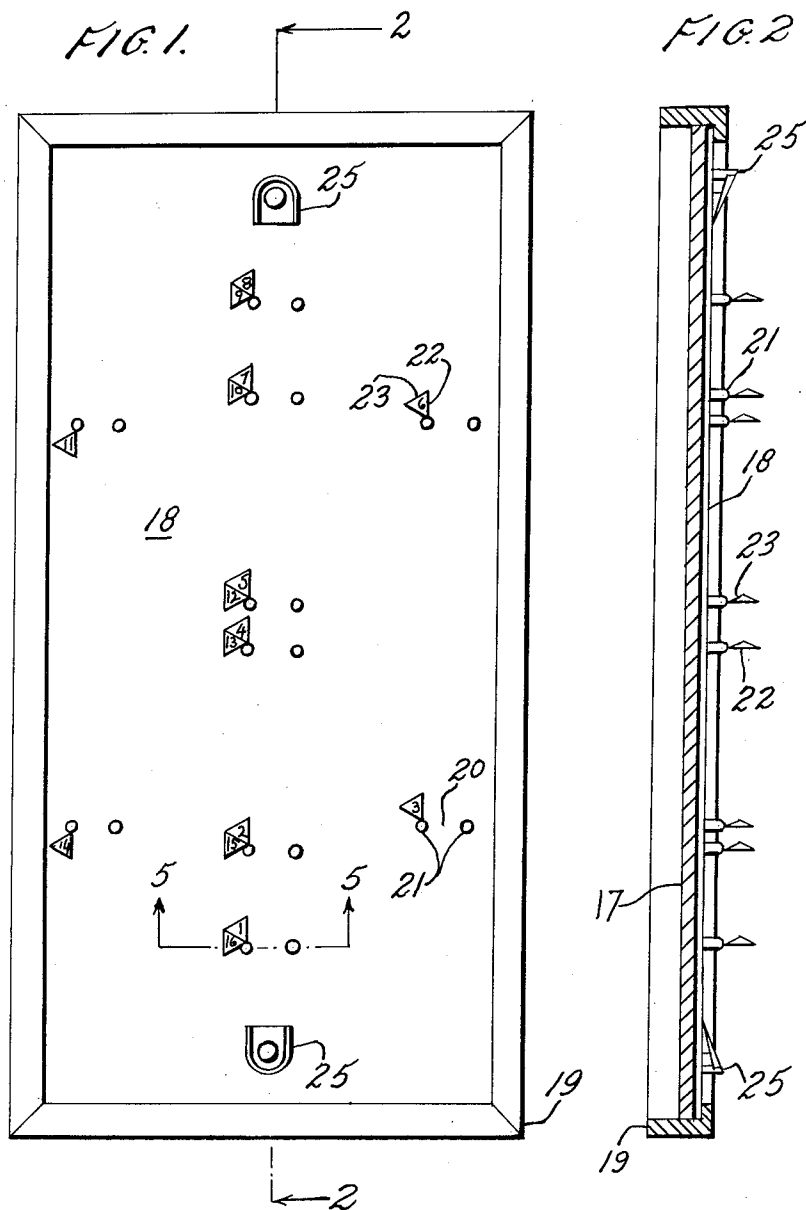
Aug. 28, 1962

W. S. MILLER
TOY BALL PROJECTOR

3,051,487

Filed April 13, 1959

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

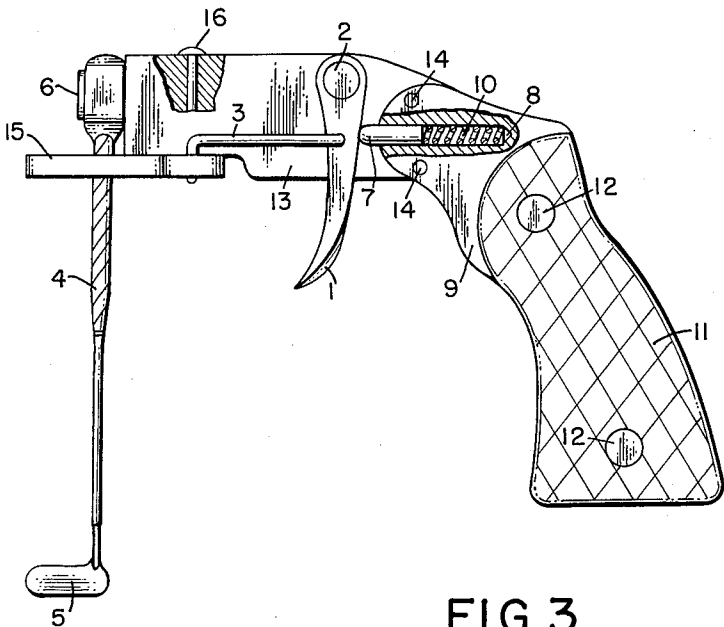


FIG. 3

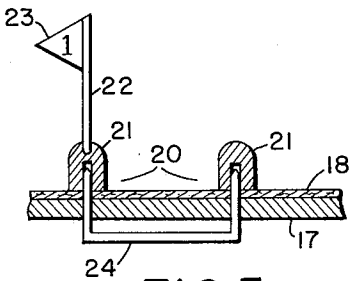


FIG. 5

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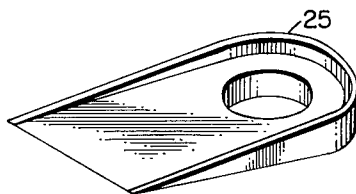
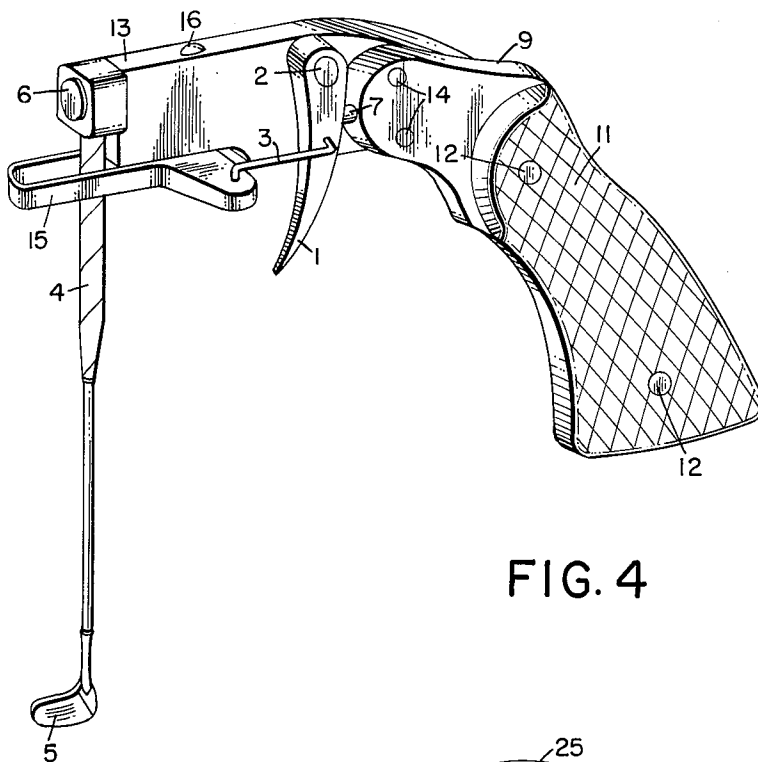
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TOY BALL PROJECTOR

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1 Claim. (Cl. 273-87.2)

This invention relates to a game of skill, played on a board or table using a special toy ball projector with which to play it.

This invention relates specifically to a game of Channel Skill, and more particularly to the special implement with which to play the game, the pistol type implement embodying a club that is actuated for striking and projecting balls or the like, in playing the game of Channel Skill.

The object of the invention is to provide an amusement toy type ball projector, held in desired position by the hand of an operator or player, having means to effect swinging movement of a club pivotally mounted thereon for striking a blow on a ball in a manner simulating the swing of a golfer, or the like, said toy being of sturdy construction to withstand abuse, yet economical to manufacture.

In accomplishing these and other objects of the present invention, I have provided details of structure, the preferred forms of which are illustrated in the accompanying drawing, wherein:

FIGURE 1 is a top plan view of the game board used in playing the game of Channel Skill;

FIGURE 2 is a longitudinal sectional view taken on line 2-2 of FIG. 1;

FIGURE 3 is a side elevational view of the toy type ball projector, parts in section;

FIGURE 4 is a perspective view of the toy ball projector illustrated by FIG. 3;

FIGURE 5 is a fragmentary sectional view taken on line 5-5 of FIG. 1; and

FIGURE 6 is a perspective view of a ramp as shown in FIG. 1.

Referring more in detail to the drawings:

The invention consists of a board 17 covered with felt 18 and set in a frame 19 to make the basic appearance of a pool table. At this point, the board is then fitted with what I call channels 20, each one consisting of two small plugs 21, one plug having a small pole 22 and numbered flag 23 on top. These are spaced far enough apart and are held in place with a U bent piece of metal 24, so a ball can roll through comfortably. There are ten of these channels located on the board surface in a planned layout. There are also two ramps 25 located, one at each end of the board, to complete the surface of the game board; it is clearly seen that the object of the game is to see which player can skillfully manipulate a ball through the channels, in rotation, numbered from one to eight on one side of the flag and back again, following the numbers from nine to sixteen on the other side of the flag. The first player to accomplish this is the winner.

A small club is needed with which to impel the ball in its travel around the playing surface. Although it is possible to play the game with this club as is, I have designed a unique device for holding it. The desired amount of force required for each shot is applied with the correct finger pressure. Light pressure for short shots and heavier pressure for the longer ones, gives the player complete control of the force needed to impel the ball. The grip, or handle, is used to position the club on the ball for the drive intended.

The pistol grip club holders shown by FIGS. 3 and 4, are the same; however FIG. 4 shows the horizontal rotatable member by a perspective view showing how the

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horizontal rotatable member 15 is pivotally mounted upon the lower end of pivot 16 extending vertically through the body frame 13. The body frame 13 is a longitudinal type frame member of rectangular cross-section having narrow longitudinal top and bottom surfaces, deep side vertical longitudinal surfaces and a vertical rectangular shaped bearing surface on the forward end thereof. A downwardly and angularly and rearwardly extending grip member 11 embodying a grip frame 9 is rigidly and integrally secured at its upper end to the grip frame 9 by screws 12, said grip frame 9 attached to the rear end of said longitudinal frame member 13 by screws 14. A club shaft 4 with upper and lower ends has a head 5 integrally secured to the lower end thereof, and a bearing member integrally secured to the upper end thereof, said bearing member having a vertical bearing surface in juxtaposition with the bearing surface on the outer end of said frame member 13, said bearing member having a horizontal bore extending therethrough. A pivot pin 6 is horizontally arranged with its rear end secured within the forward end portion of said longitudinal frame member 13 and having its forward end extending outwardly beyond said vertical bearing surface at the forward end of said frame member, said bearing member at the upper end of said shaft 4 being pivotally mounted upon said pivot pin 6, said pivot pin 6 extending through said bore in said bearing member, the bearing surface of said bearing member being in sliding contact with the vertical rectangular shaped bearing surface on the forward end of said frame member 13. The club shaft 4 and club head 5 are movable in a vertical plane arranged at right angles relative to a plane extending vertically through said frame member. A solid longitudinal type trigger 1 with upper and lower ends is mounted upon the frame 13. A transverse bore extends into the side wall of the frame 13. The trigger 1 is pivotally mounted upon an outwardly extending pin 2 arranged in said transverse bore in the side surface and intermediate the ends of said frame member 13. A bore 8 is horizontally formed with a closed rear end and extending within the upper end of said grip frame 14 forming a part of the grip member 11. A plunger 7 is mounted within said bore 8 within the grip frame 14 and a compressible coil spring 10 is assembled between the plunger 7 and the closed rear end of said bore 8 in said grip member, said spring urging the plunger 7 forwardly and outwardly from said bore 8. The forward end of said plunger 7 is in frictional contact with the rear vertical side of the trigger 1 whereby said trigger 1 can be actuated by the finger of the operator pressing upon the forward vertical side of the trigger 1 and thereby compressing the spring 10. A rod 3 is pivotally connected with the trigger 1 intermediate its upper and lower ends. The rod has a rear end portion turned horizontally at right angles relative to its intermediate portion and it extends into a suitable bore in said trigger. The forward end of said rod 3 is turned vertically downwardly with relation to its intermediate portion thereof and extends into a vertical bore and is pivotally assembled with the rear end portion of said horizontal rotatable member 15 which is mounted on said pivot 16. The rotatable member comprises a vertical aperture in the forward end thereof. The club shaft 4 extends through the said vertical aperture in said rotatable member. The internal side walls of said vertical aperture contacts the said club shaft 4 during movement thereof, whereby pivotal movement of said club shaft 4 is effected when said trigger 1 is squeezed toward said grip member 11 by an operator, the club head 5 striking and projecting balls in playing position on the game board 17 when the device is properly positioned by the operator relative to the balls. The club is returned for the next swing by said plunger 7 arranged in hole 8 and energized by said spring 10.

Notice that the swing of the club is not controlled by rubber bands or springs, as they would cause the club to swing with the same force. This would cause the pressure of each stroke to be identical, giving the player no control of the shot intended.

The action of my club depends entirely on the skill of the player. He must control the club distance above the playing surface and the force of each shot with the proper finger pressure, light pressure for short shots and heavier pressure for the longer ones.

RULES OF THE GAME

"Channel Skill"

(1) At the beginning of the game, the ball must be put on the line, one half the distance between the starting ramp and the middle of the first channel.

(2) The ball must be struck and not pushed.

(3) Every player has the right to another stroke after driving his ball through a channel, or hitting a ball, and may continue until he fails to do either.

(4) A player must go through a channel before he can hit his opponent the second time.

(5) The tour of the ball continues as long as it makes a point, and points are counted entering channels from either side, but must be made in the rotation the flags are numbered 1, 2, 3, 4, etc.

(6) Every stroke counts, if the ball moves, however slightly.

(7) If a player plays out of turn, he loses his next turn.

(8) If a member of the game plays with the wrong ball, the player must replace the ball and lose his turn.

(9) After passing through #3 channel, the twin channels in the center of the board can be used as a special if desired.

(10) To score a special, ball must pass between the two channels marked 4 and 5 and the player must call his shots by calling out special.

(11) If the player makes his special, he has a right to 4 strokes.

(12) A player must pass through 3 channels before he can try another special.

(13) If the player misses his special, he loses his next turn.

(14) If any part of the ball fails to completely clear the special area on a special try, the player must ask the contestant nearest to free him by a ricochet shot. They may do so on their next turn or must on the following.

(15) When a player frees a man, he is entitled to that man's special for his reward.

(16) When passing through channels 7 and 8 (and accomplished in one shot), the ball goes up ramp and into hole, the player has a right to four strokes.

(17) A player cannot possess more than 4 strokes at one time.

(18) If a ball is driven from the board the player loses one turn and the ball is set on the board where it went off.

(19) Any number of players can play. The first one to go through the last two channels 15 and 16 and go into the hole in the last ramp on one shot wins.

(20) Two, three or four teams can be picked with two, three or four players on a team, the first team with every player to finish wins.

(21) After a player or a team wins, the remaining players or teams can finish to see who wins among them.

A game similar to golf can be played by removing channels #2, 15—#4, 13—#5, 12 and #7, 10. Then by leaving channel #1 as is, and replacing channel marker numbered 8, 9 with channel marker #2, leaving #3 as is, replace #11 with #4, replace #14 with #5 and leave #6 as is, a 6 hole golf course has then been set up, with the channels representing the holes. Score as in golf, making the putt from either side of the channel. Tee off from

the farthest point on the board opposite the hole (channel) trying to score on.

A miniature game of croquet can be played by removing all of the channels and replacing them with small wickets, except for the middle of the board, where only one wicket would replace the two channels. All spots on the board are drilled for any changes from one game to another. The two ramps are replaced by 2 stakes, thus making the area ready for croquet.

In accordance with the foregoing description, it is clear that the present invention fulfills the purpose for which it is intended and it is understood as well as conceded that various changes may be made in materials, sizes, layout design and in the details of the construction without departing from the spirit of this invention, understanding therefore, that this invention is not to be limited to the specific construction shown and described.

What I claim is:

A device of the character described comprising, a longitudinal frame member of rectangular cross-section having narrow longitudinal top and bottom surfaces, deep side vertical longitudinal surfaces and a vertical rectangular shaped bearing surface on the forward end thereof, a downwardly and angularly and rearwardly extending grip member rigidly and integrally secured at its upper end to the rear end of said longitudinal frame member, a club shaft having upper and lower ends, a club head integrally secured to the lower end of said club shaft, a bearing member integrally secured to the upper end of said club shaft having a vertical bearing surface and a horizontal bore extending therethrough, a pivot pin horizontally arranged with its rear end secured within the forward end portion of said longitudinal frame member and having its forward end extending outwardly beyond said vertical bearing surface at the forward end of said longitudinal frame member, said bearing member at the upper end of said shaft pivotally mounted upon said pivot pin, said pivot pin extending through said bore in said bearing member and the vertical bearing surface of said bearing member in sliding contact with the vertical rectangular shaped bearing surface on the forward end of said frame member, said club shaft and said club head movable in a vertical plane at right angles relative to a plane extending vertically through said frame member, a solid longitudinal type trigger with upper and lower ends, said trigger having a transverse bore therein adjacent its upper end and pivotally mounted upon an outwardly extending pin arranged in one side surface and intermediate the ends of said frame member, a bore having a closed rear end arranged within the upper end of said grip member, a plunger mounted within said bore within said grip member, a compressible coil spring assembled between said plunger and the closed rear end of said bore in said grip member urging said plunger forwardly and outwardly from said bore, the forward end of said plunger in frictional contact with the rear vertical side of said trigger, said trigger actuatable by the finger of an operator pressing upon the forward vertical side of said trigger and compressing said spring, means pivotally connected with said trigger intermediate its upper and lower ends comprising a rigid rod with a rear end portion turned horizontally at right angles relative to its intermediate portion and extending into and pivotally assembled with said trigger, the forward end of said rod turned vertically downwardly with relation to the intermediate portion thereof and extending into and pivotally assembled with the rear end portion of a horizontal rotatable member, the rear end portion of said rotatable member being mounted upon the lower end portion of a vertical pin extending upwardly through said frame member, the forward end portion of said rotatable member comprising a vertical aperture, said club shaft extending through said vertical aperture, the internal side walls of said vertical aperture contacting said club shaft during movement thereof, whereby pivot-

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al movement of said club shaft is effected when said trigger is squeezed toward said grip member by an operator.

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