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Fabricant

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[54] **PNEUMATIC BOARD GAME APPARATUS**

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[51] **Int. Cl.** **A63f 3/00**

[58] **Field of Search**..... 273/85, 94, 119, 273/130, 131, 136, 134

[56] **References Cited**

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[57] **ABSTRACT**

A toy including a playing board having two groups of holes in its top face and supporting a partition which prevents each player from seeing his opponent's group of holes. An air channel interconnects each hole of one group with only one hole of the other group. Each player is furnished with a set of playing pieces, fewer in number than the number of holes in his group, and a pump means. Each playing piece has an extension which can be slidably accommodated in any of the holes, and each pump means has a nozzle which can be accommodated in any of the holes. Thus, if a playing piece is engaged with a hole in the first group, the pump nozzle is engaged with a hole in the second group, and the engaged holes are connected by a channel, operation of the pump means causes an impulse of air to travel through the channel and the playing piece is ejected from the board. The pump means may be a bellows. The air channels may be created by forming the board of two layers, the top layer having grooves in its lower surface which are closed by a bottom layer.

7 Claims, 6 Drawing Figures

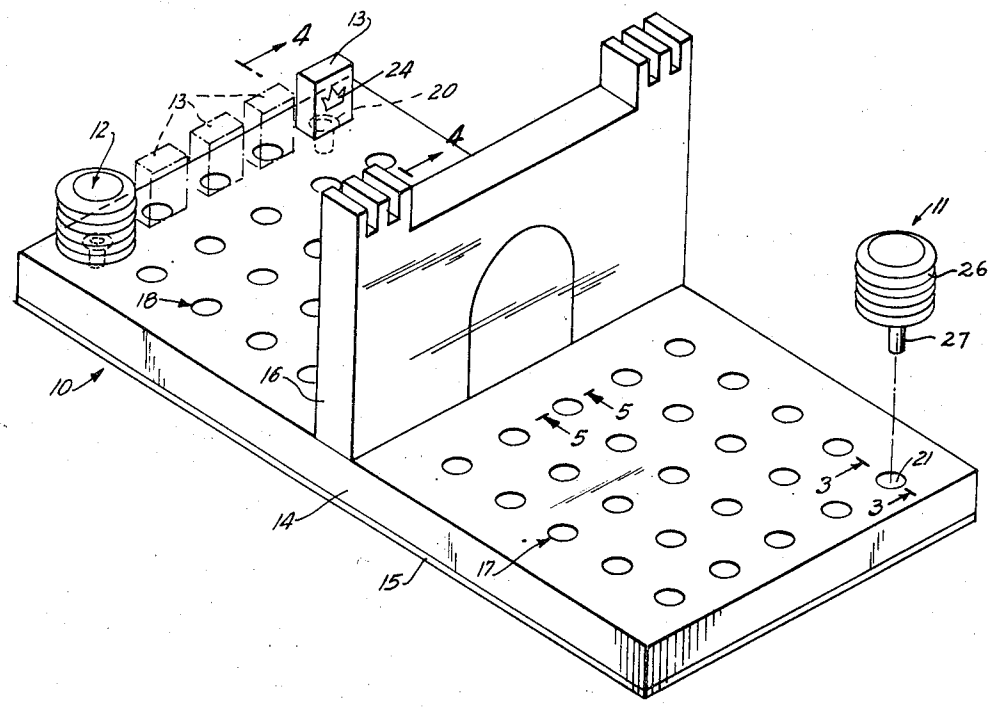


FIG. 1

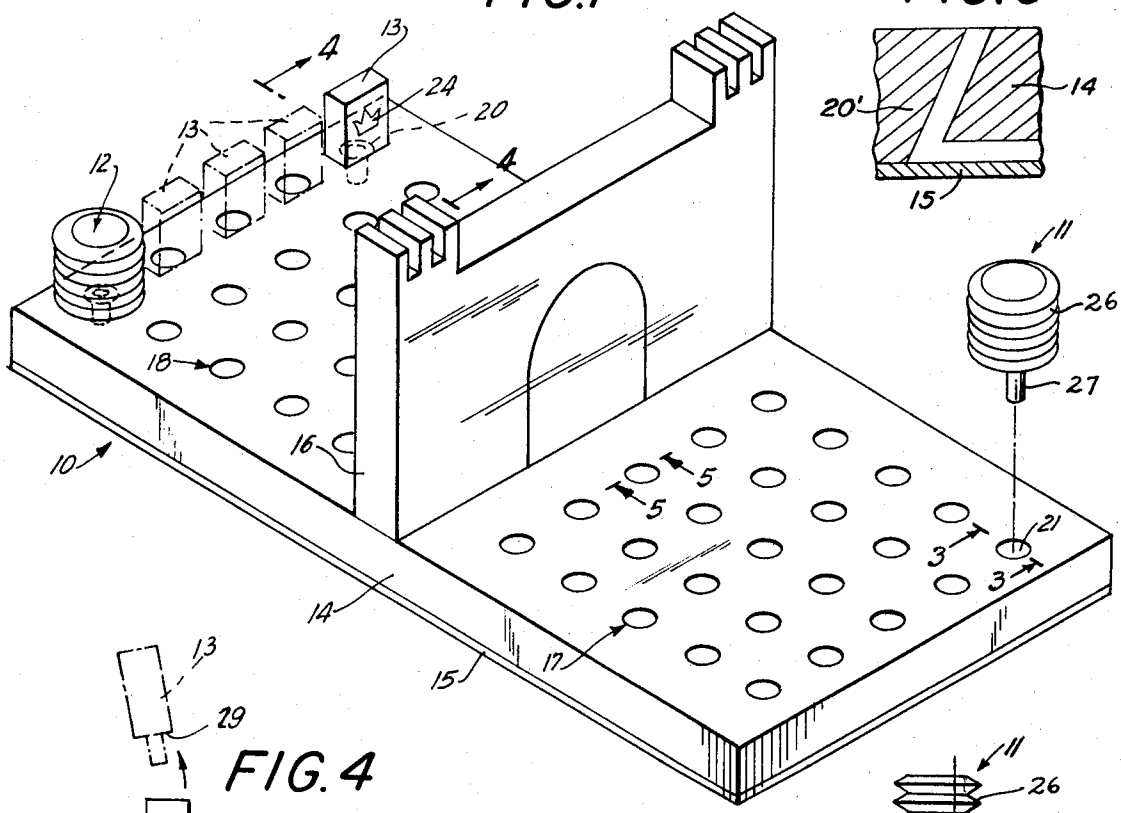


FIG. 6

FIG. 4

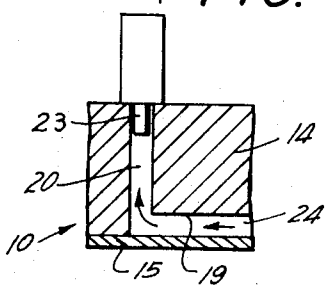


FIG. 5

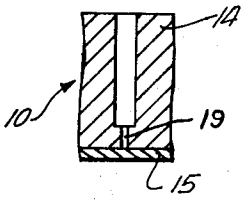


FIG. 3

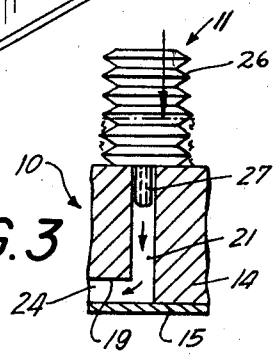
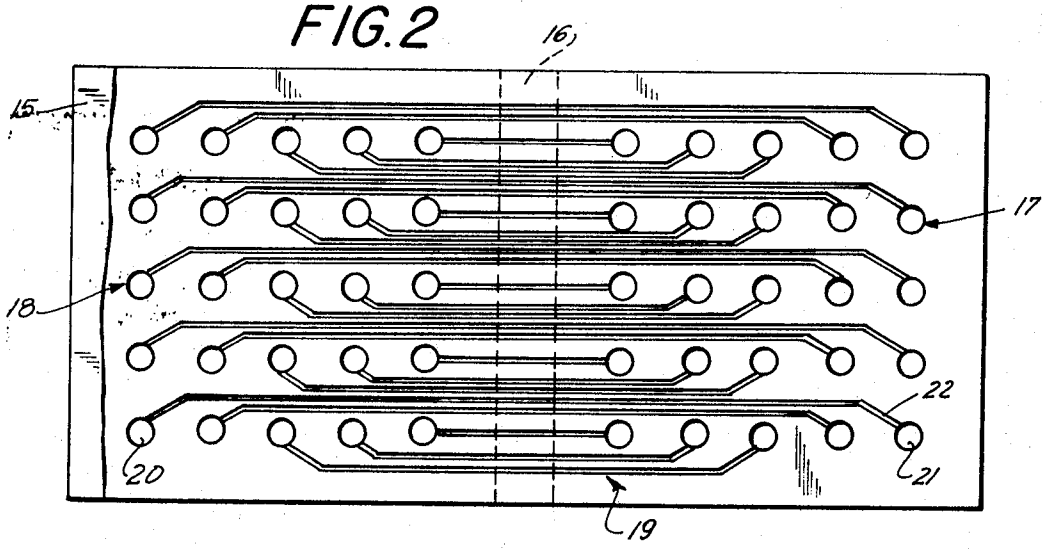


FIG. 2



PNEUMATIC BOARD GAME APPARATUS

The subject invention relates to toys and in particular to a toy wherein playing pieces or projectiles are caused to travel by air impulses.

It is an object of the present invention to provide a toy which is played with by two adversaries, and challenges each player to guess his opponent's moves and strategy.

It is another object of the invention to provide such a toy which offers the intellectual challenge mentioned above while also requiring physical action by the players.

It is a further object of the invention to provide such a toy wherein a player's correct guess of his opponent's move is rewarded with the opportunity to blast his opponent's playing piece from the playing board.

It is an additional object of the invention to provide a playing board for a pneumatic toy having air channels which may be manufactured very inexpensively on a mass production basis.

In a game using the toy in its preferred form, the rules may require that the players catch ejected projectiles so as to cause the players to exercise and improve their coordination.

Additional objects and features of this invention will become apparent by reference to the following description in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of the toy, according to the invention;

FIG. 2 is a bottom view of the game board of the toy, the bottom layer of the board being partially broken away to show the grooves which connect the holes in the top layer of the board;

FIG. 3 is a fragmentary cross-sectional view, taken along lines 3—3 in FIG. 1, showing a bellows, before and after its compression, engaged with a hole on the game board;

FIG. 4 is a fragmentary cross-sectional view, taken along lines 4—4 in FIG. 1, showing a projectile before and after its discharge from the board by an impulse of air;

FIG. 5 is a fragmentary cross-sectional view, taken along lines 5—5 in FIG. 1; and

FIG. 6 is a view similar to FIG. 4 of an alternative embodiment.

A preferred embodiment of the toy according to the invention is shown in FIG. 1. The toy includes a game board 10, a pair of bellows 11 and 12, and a plurality of projectiles 13. For the sake of clarity of illustration, only the projectiles 13 allocated to the player sitting at the far end of the board 10 in FIG. 1 are shown. However, it is to be understood that each player will usually be provided with one or several projectiles 13.

The game board 10, in this example, is a rectangular member including a top layer 14, a bottom layer 15, and an upstanding opaque partition 16 extending across the middle of the board. The board layers 14 and 15 may be molded or otherwise formed from suitable plastics, by ways well known to those skilled in the fabricating arts, and partition 16 may be of plastic, cardboard, or other suitable material. The top layer 14, shown in FIG. 1, is substantially flat, although it need not be so, and includes a set of circular holes 17 on one side of partition 16, and a set of circular holes 18 on the other. Each set of holes is allocated to the player closest to them. Each of the holes 17 and 18 passes perpendicularly through the thickness of the top layer 14, and a set of grooves 19 is formed in the bottom surface of the top layer 14. Each hole of the set 17 is connected by one of the grooves 19 to only one hole of the set of holes 18 (for example, see holes 20 and 21, and groove 22 in FIG. 2), and the hole of set 18 to which each hole of set 17 is connected is different from the hole of set 18 to which each of the other holes of set 17 is connected. When the game board 10 is assembled, the bottom board 15 is fixed such as by screws or a suitable adhesive, to the bottom surface of the top board 14, thereby closing one end of the holes 17 and 18 and converting each of the grooves 19 to air channels. Thus, for example, groove 22 and bottom board 15 provide a channel 24 (see FIGS. 3 and 4), and the channel 24 connects hole 20 to hole 21.

It will be appreciated that the arrangement described above offers a very inexpensive way of providing closed air channels 24 within the playing board 10.

In this example, the opaque partition 16 resembles the wall of a castle and is perpendicularly fixed, between the sets of holes 17 and 18, to the top surface of the board 14. When, as more fully described below, the toy is being used to play a game, the partition 16 serves to conceal from each player the set of holes 17 or 18 allocated to his opponent.

The bellows 11 is used as a means for pumping an impulse of air through any one of the channels. More particularly, bellows 11 includes a collapsible air chamber 26 formed, for example, from a plastic, and a circular nozzle 27 whose outside diameter is slidably engageable with the holes 17 and 18 on the game board 10 (see FIGS. 1 and 3). The air chamber 26 generally resembles a flexible cylinder which is axially collapsible and the nozzle 27 extends axially from the bottom part of the chamber 26. As a result, when the nozzle is introduced into one of the holes on the game board 10, the bottom portion of the chamber abuts against the top surface of the game board 10 (see FIG. 3). In this condition, a sharp blow struck against the top of the chamber 26 causes compression of the air chamber along its axis producing an impulse of air which travels through the channel associated with the hole accommodating the bellows nozzle. Bellows 12 is identical to bellows 11 and is provided so that each of two players can have his or her own bellows.

The projectiles 13 each include a circular extension 23 (FIG. 4) which is slidably engageable with the holes 17 and 18 on the game board 10 and a structure which is a suitable vehicle for letters, numbers, or ornamental designs 24 (see FIG. 1). Each structure includes a flat surface 29 (see FIG. 4) which abuts against the game board 10 when its extension is engaged with a hole. As a result, if an impulse of air is delivered to a projectile associated with a hole, the air acts against the bottom face of extension 23 and against surface 29, and the impulse causes the projectile to be ejected from the game board 10 (see FIG. 4).

A game for two players using the equipment described above, may be played as follows. Each of two players is assigned one of the sets of holes 17 or 18, four projectiles 13 and one of the bellows 11 and 12. Initially, the players place the projectiles 13 assigned to them in any four of the five holes at the end of the board closest to them. His opponent will, of course, not know which four holes are occupied. Thereafter, each

player alternately takes a turn comprising the steps of: moving one of his projectiles to an adjacent hole, inserting the nozzle **27** of his bellows into a vacant hole in his side of the game board, and striking the bellows, thereby causing an impulse of air to travel through a channel. Since the player striking the bellows cannot see his opponent's side of the board, he does not know whether the impulse of air will pass through a vacant hole or will cause an opponent's projectile to be ejected from the board. If a projectile **13** is caused to be discharged from the game board **10** by the impulse of air, that projectile is removed from the game. The rules may provide that a discharged projectile must be caught by the player who depressed the bellows or it remains in the game. The first player to advance one or more of his projectiles to the partition **16** is considered to be the winner of the game.

In the example described above, holes **17** and **18** pass perpendicularly through board layer **14.** However, if desired, the holes could pass through at some other angle, and in fact all the holes need not necessarily pass through at the same angle. For example, as shown in FIG. **6,** each hole **20'** could be angled upwardly toward partition **16** so that when a projectile is ejected from the board it is propelled upwardly and toward the player who caused the ejection, making it easier for that player to catch the projectile.

In addition, although grooves **19** have been described above, and illustrated, as being formed in the bottom surface of top layer **14,** the grooves could alternatively be formed in the upper surface of bottom layer **15.** The location of the grooves in bottom layer **15** would of course be carefully determined so that when the top and bottom layers of the board are mated, each end of each groove registers with one of the holes in the upper layer.

It is to be understood that the description herein of a preferred embodiment according to the invention is set forth as an example thereof and is not to be construed or interpreted as a limitation on the claims

which follow and define the invention.

What is claimed is:

1. A game apparatus comprising:

a. a board for placement between two players;

b. a first and second set of holes in the board; each set bring allocated to one of the players;

c. a set of channels, each channel connecting a hole in the first set of holes to a hole in the second set of holes;

d. a partition between the first and second set of holes for preventing each player from seeing the set of holes of his opponent;

e. a plurality of projectiles slidably engageable with the first and the second set of holes; and

f. pump means including a nozzle slidably engageable with any of the first and second set of holes, whereby if a projectile and the pump means are engaged with holes which are coupled by one of the channels and the pump means are actuated, the projectile is caused to leave its hole on the board.

2. A game apparatus as defined in claim **1** wherein each projectile includes a structure having an extension for slidably engaging any of the first and second set of holes.

3. A game apparatus as defined in claim **1** wherein the pump means include a bellows.

4. A game apparatus as defined in claim **1** wherein each of said channels interconnects only one hole in said first set of holes and one hole in said second set of holes.

5. A game apparatus as defined in claim **1** wherein said holes are perpendicular to the plane of said board.

6. A game apparatus as defined in claim **1** wherein at least some of said holes are arranged at an acute angle to the plane of said board.

7. A game apparatus as defined in claim **1** wherein each of said first and second set of holes is arranged in an array with some of said holes arranged closer to said partition than others of said holes.

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