United States Patent

Kane

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[54] CHESS GAME APPARATUS

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[52] **U.S. Cl.** .....**273/131 AC,** 211/148

[51] **Int. Cl.**.....**A63f 3/02**

[58] **Field of Search**.....273/130, 131, 136

[56] **References Cited**

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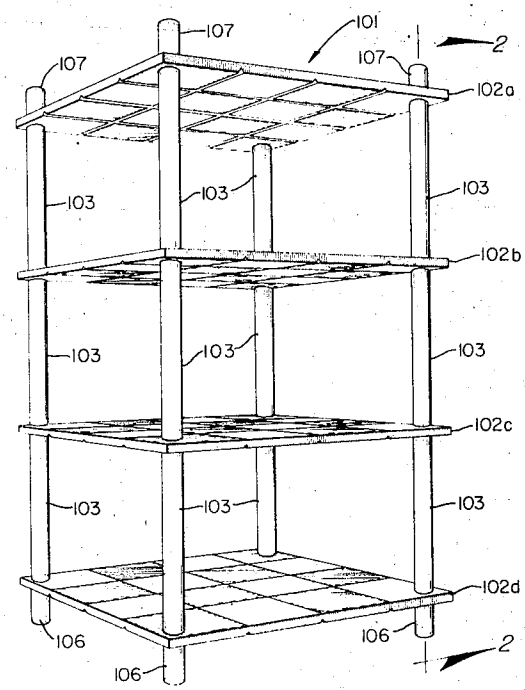
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[57] **ABSTRACT**

A chess game apparatus is disclosed having a game board comprised of four vertically spaced-apart layer members. Each layer member has a square-shaped checkboard pattern formed by 16 squares on its upper surface and is preferably supported in a horizontal plane. The game is for play by two opponents, each using a chess set of eight pawns, two rooks, two knights, two bishops, one queen and one king. Four of the pawns of each chess set are distinctively marked so as to permit identification distinct from other pawns.

2 Claims, 4 Drawing Figures



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SHEET 1 OF 2

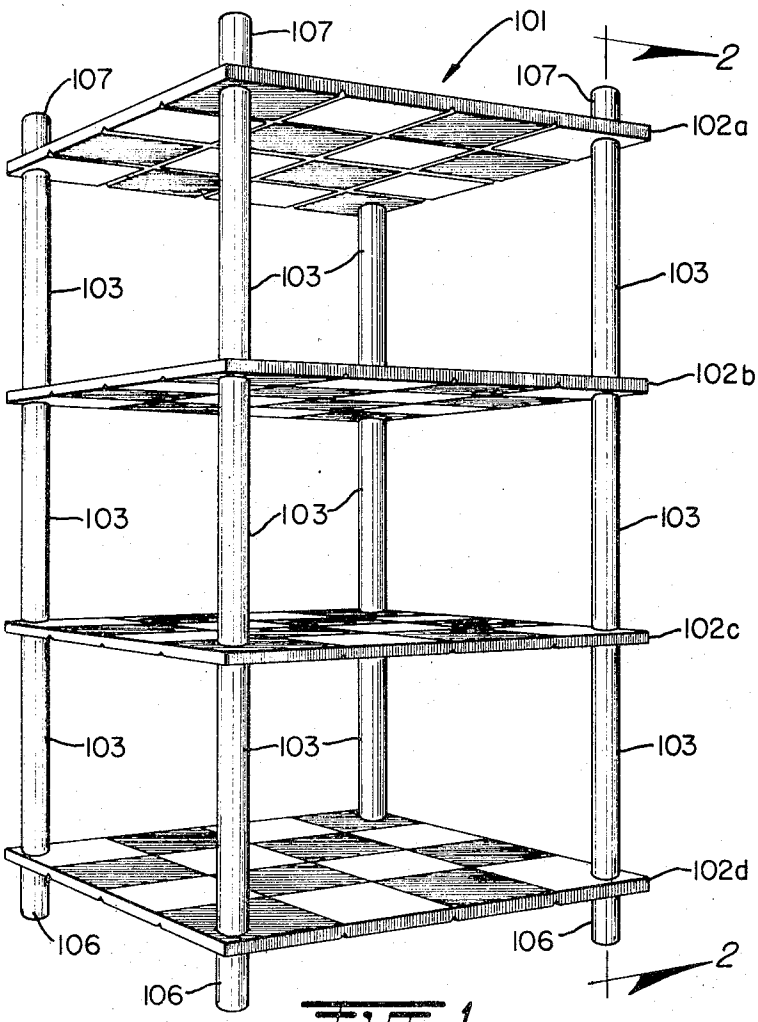


FIG. 1

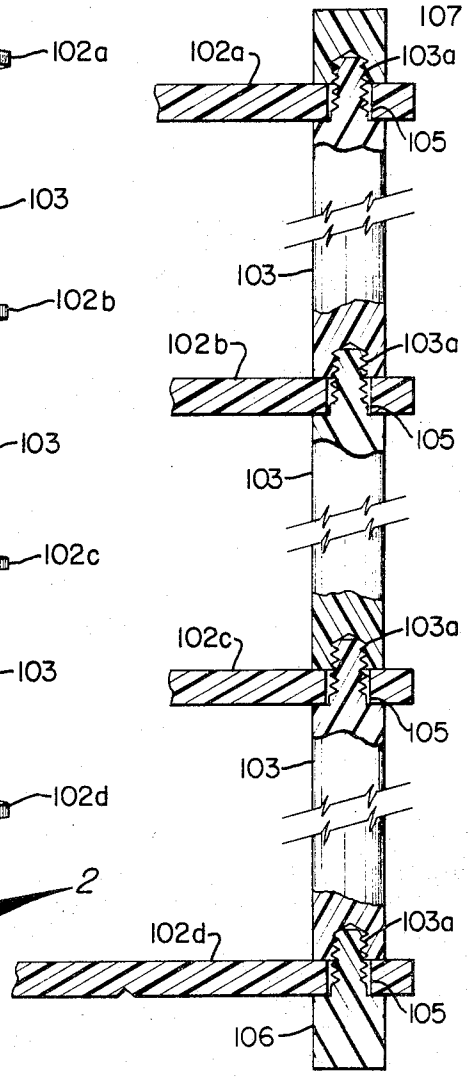


FIG. 2

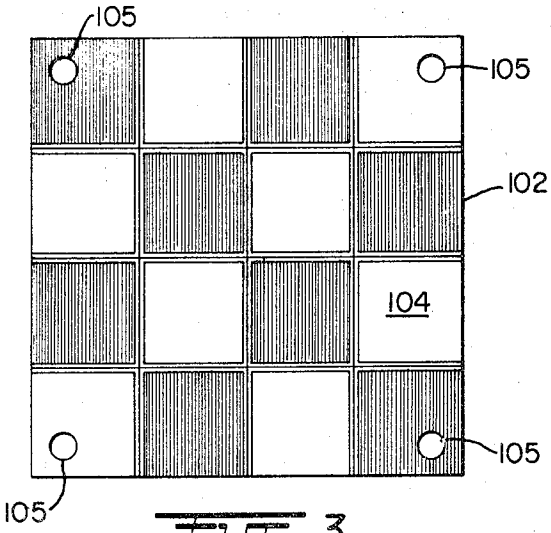


FIG. 3

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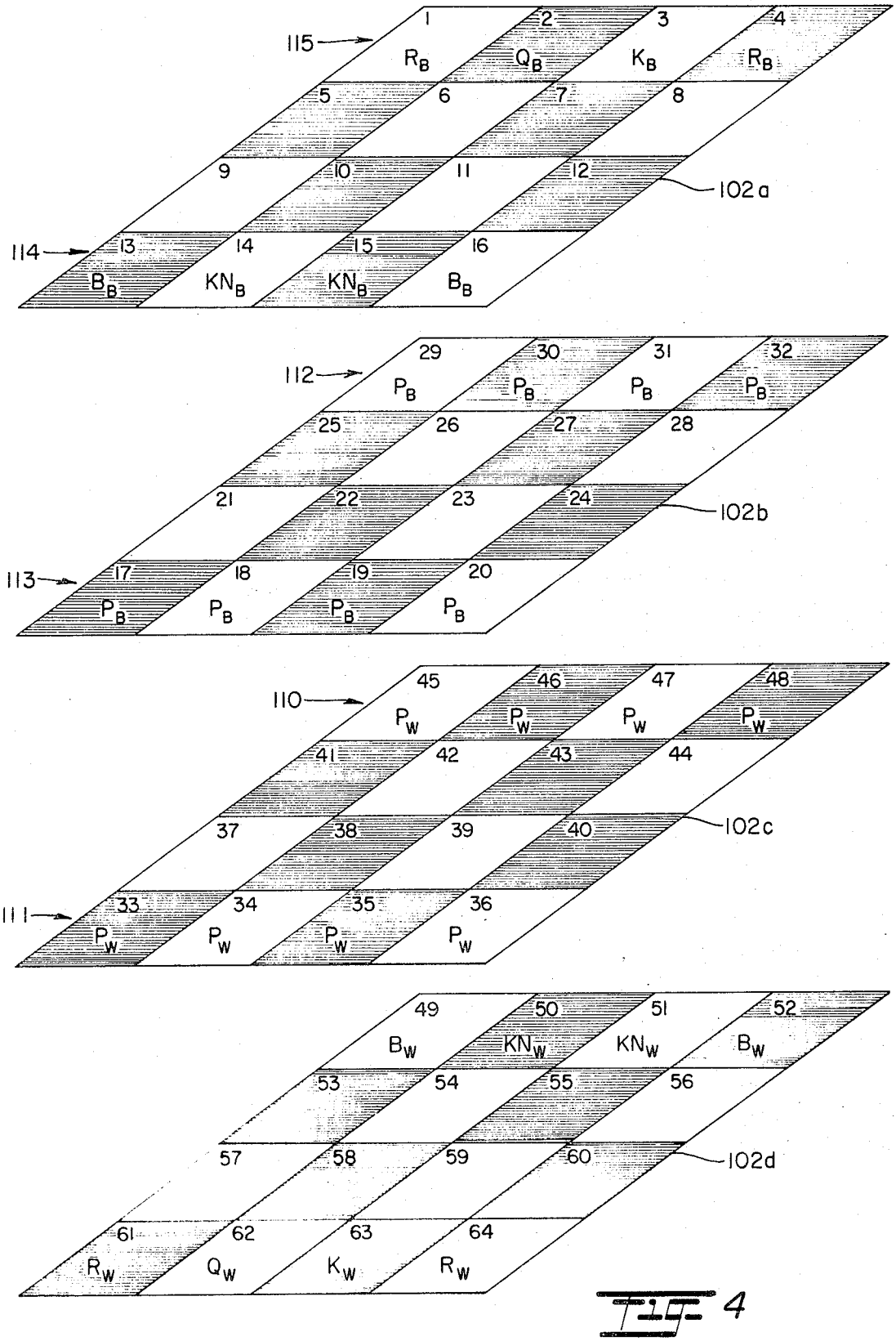

115
1
2
3
4
R_B
Q_B
K_B
R_B
5
6
7
8
9
10
11
12
102a
114
13
14
15
16
B_B
KN_B
KN_B
B_B
112
29
30
31
32
P_B
P_B
P_B
P_B
25
26
27
28
21
22
23
24
102b
113
17
18
19
20
P_B
P_B
P_B
P_B
110
45
46
47
48
P_W
P_W
P_W
P_W
41
42
43
44
37
38
39
40
102c
111
33
34
35
36
P_W
P_W
P_W
P_W
49
50
51
52
B_W
KN_W
KN_W
B_W
53
54
55
56
57
58
59
60
102d
61
62
63
64
R_W
Q_W
K_W
R_W

FIG 4

CHESS GAME APPARATUS

The present invention relates to games and more particularly to a chess game apparatus.

The game of chess is a well-known ancient war game which is quite popular. Traditionally, the game is played by two players on a two-dimensional checkered game board having 64 squares. In the game of chess, there are a number of different classes of pieces, i.e., kings, queens, bishops, knights, rooks and pawns. The manner in which each of these classes of pieces may be moved on the game board is defined by the rules of the game so as to be different from the permitted movement of other classes. It is this difference in the manner in which various pieces may be moved which renders the game relatively complex, and no doubt adds to the game's popularity by making the playing of the game a rather stimulating mental exercise.

Therefore, since the ultimate goal behind the game of chess appears to be to challenge the minds of the players, games similar to chess have heretofore been devised which are played in three dimensions. The rationale behind these three-dimensional games was that if a two-dimensional game is found mentally stimulating, a three-dimensional game would be even more intellectually stimulating and consequently more enjoyable. Typically, however, these prior art three-dimensional games have deviated from the traditional game of chess, either by adding more classes of pieces, more squares to the playing area, or even more players. As a result of these deviations, a certain amount of the historical charm of the game was naturally lost.

It is, accordingly, an object of the present invention to provide a novel chess game apparatus which is three-dimensional and which is played in a manner closely paralleling the traditional game of chess.

It is a further object of the present invention to provide a novel chess game board comprised of four vertically spaced-apart layer members, each one of the layer members having the same number of playing squares as the others.

It is yet another object of the present invention to provide a novel chess game apparatus which is three-dimensional and permits selective introduction of variations to the conventional game of chess as a natural extension of the game.

It is additionally an object of the present invention to provide a novel chess game apparatus which has a game board of 64 squares comprised of four vertically spaced-apart parallel layers, each layer having 16 squares thereon, and which is played by the two players using the standard pieces of a conventional chess set.

In accomplishing these and other objects, there has been provided in accordance with the present invention a chess game apparatus having a checkered game board made of four vertically spaced layers. Each layer has sixteen squares thereon so that the game board has a total of 64 squares, as a conventional chess board. The game is played by two players using the pieces of a conventional chess set. The chess pieces are arranged on the various layers in a predetermined manner at the commencement of a game and the moves of the pieces are defined so that they may be moved in the three-dimensional playing area. The moves of each class of pieces are defined, however, so that they closely approximate the moves of the same pieces in a traditional chess game. Thus, a novel three-dimensional chess game apparatus is provided which is played in a manner closely paralleling a traditional game of chess, but has the added mental stimulation of being played in three dimensions.

A better understanding of the present invention may be had from the following detailed description when read in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of an assembled game board of a chess game apparatus according to the present invention;

FIG. 2 is a view taken above the line 2—2 of FIG. 1;

FIG. 3 is a top view of one of the similar layer members making up the game board of FIG. 1; and

FIG. 4 is a perspective view of the playing area provided by the game board of FIG. 1, showing the positions of the pieces of a conventional chess set thereon at the commencement of a game of three-dimensional chess.

Referring to the drawings in more detail, there is shown in FIG. 1 a preferred form of game board generally indicated by the numeral **101**. The game board **101** has four identical layer portions or members **102**, one of which is shown in FIG. 3. The upper side of each layer portion **102** has a checkerboard design of 16 playing squares **104** formed thereon. The squares **104** are all uniform in size and arranged in rows so as to form a square-shaped playing area on each layer member **102**. The layers **102** are identified from top to bottom by the designations **102***a*–**102***d*, respectively. The layers **102** are spaced vertically apart, preferably one above the other, by support members **102** with the checkered pattern of squares **104** of all the layers **102** being aligned in the same sense so that one checkerboard pattern of squares **104** corresponds with the others, as shown in FIG. 4. An exemplary one of the squares **104** is identified in FIG. 3.

Holes **105** are formed in each of the corners of the layers **102**, as shown in FIGS. 2 and 3. Threaded portions **103***a* of the support members **103** are inserted through the holes **105** and other support members **103** are screwed onto the projecting thread portions **103***a*, thereby to support the layers members **102**. The layers **102** are preferably supported so as to be parallel with respect to each other and the support members **102** may be tubular in shape. The manner in which the support members **103** support the layers **102** is shown in detail in FIG. 2. Attachments **106** and **107** are shown for securing the bottom layer **102***d* and the top layer **102***a* to their adjacent support members **103**, respectively. It is noted that other conventional members and means could be employed for supporting the layers **102** in a spaced-apart relationship.

Referring now to FIG. 4, the playing area provided by the game board **101** is shown therein. For explanation purposes, the squares **104** of the game board **101** are numbered from 1 to 64. As shown in FIG. 4, the squares of the layer members **102***a*, **102***b*, **102***c* and **102***d* are numbered, respectively, from 1–16, 17–32, 33–48 and 49–64. Half the squares are of one color r such as, black, while the other half of the squares are of another color, such as, white. The pieces of a conventional chess set are indicated by letters on the game board **101** in their positions at the commencement of a game of chess. The following designations are used for

identifying the chess pieces on the game board **101**. The pieces are assumed to be black and white as they usually are in the game of chess.

Chess Piece	Black	White
King	K_B	K_W
Queen	Q_B	Q_W
Bishops	B_B	B_W
Knights	KN_B	KN_W
Rooks	R_B	R_W
Pawns	P_B	P_W

A table is given below indicating the squares upon which the respective chess pieces are positioned at the commencement of a game:

Chess Piece	Black No. of Pieces	Square	Chess Piece	White No. of Pieces	Square
K_B	1	3	K_W	1	63
Q_B	1	2	Q_W	1	62
B_B	2	13, 16	B_W	2	49, 52
KN_B	2	14, 15	KN_W	2	50, 51
R_B	2	1, 4	R_W	2	61, 64
P_B	8	17–20, 29–32.	P_W	8	33–36, 45–48.

The standard rules of chess are used in playing this three-dimensional game of chess except for the modifications hereinafter mentioned which are necessary to adapt the game of chess to three dimensions. Reference may be made to United States Letters Patent No. 1,877,154 issued to Walter R. Weaver wherein the standard rules of chess are set out.

The moves of each of the pieces in this three-dimensional chess game are now discussed in order to illustrate how the game would be played by two players or opponents.

PAWNS

A pawn is allowed to move forward one square at a time. Additionally, a pawn may move vertically one level at a time in the direction of the opposite side's king or queen. To capture, a pawn may only capture diagonally as in standard chess. Therefore, a pawn may not capture an opponent by moving to a different level. Further, a pawn may not jump men as in standard chess. In order for a pawn to be exchanged for another piece, it has to move to the level of the opposite side's king to the opposite side of the board from which it started the game.

To illustrate, P_W on square **45** would have to move to any of the squares **13–16** in order to be changed for a piece, while P_W on square **34** would have to move to any of the squares **1–4**. In order to keep track of which pawns have to move to squares **1–4** and which to squares **13–16**, the white pawns on squares **33–36** may be marked in order to identify them from the white pawns on squares **45–48**.

On layer **102***c*, the forward direction of the pawns on squares **45–48** is from the line of squares designated **110** to the line of squares designated **111** while the forward direction for pawns on squares **33–36** is just the opposite, i.e., from the line of squares **111** to line **110**. Any of these white pawns may be moved vertically upwards from layer **102***c* to **102***b*. On layer **102***b*, the pawns from squares **45–48** may be moved towards the line of squares designated **112** and the white pawns from the square **33–36** may be moved towards the line of squares designated **113**. White pawns from the layer **102***b* may be moved vertically upward to the layer **102***a*. On the layer **102***a* white pawns from the squares **45–48** may be moved towards the line of squares designated **114** while white pawns from the squares **33–36** may be moved towards the line of squares designated **115**. It is again noted that each move of the pawns is limited to one square or layer at a time, and that the only time a pawn may be moved diagonally is when capturing.

With regard to the black pawns, the manner in which they move is similar to that described for white pawns. Black pawns, however, will be moved vertically downward on the game board **101**. The black pawns on the squares **29–32** would be marked differently from the black pawns on the squares **17—20** so that it may be determined which is the forward direction of movement for these pawns on layers **102***b*, **102***c* and **102***d* and to which square each particular black pawn has to be moved in order to be entitled to be changed for another piece.

BISHOPS

The bishop will move horizontally in a diagonal direction as in standard chess. On any plane **102** it can move diagonally on its own color, but must stop where it reaches the edge of the plane or layer and cannot move vertically in the same move. In a separate move, the bishop will move vertically, or three-dimensionally, by moving diagonally through the planes **102**. To illustrate, if the bishop is on square **39**, it may move diagonally and horizontally to squares **36, 42, 45, 44** or **34**. From square **39** is could move diagonally and vertically to squares **64, 62, 56, 54** on plane **102***d*; **20, 26, 28, 18** on plane **102***b*; and square **1** on plane **102***a*. It cannot combine a horizontal and vertical move and cannot jump over other chess men.

KNIGHTS

The knights move in an L-shaped three-square movement as in standard chess. In three-dimensional chess this L-shaped movement may, however, be on one layer or by moving vertically and horizontally. To illustrate, the KN_W on square **50** could move on one move to any of the following squares: **57, 59, 56, 48, 38, 29, 26** or **31**. The knights may jump over pieces in their moves, as in standard chess.

ROOKS

The rooks move in a straight line as in standard chess. This straight line may be either horizontal or vertical. To illustrate, the R_W on square **61** could be moved therefrom to any of the following squares on one move: Squares **47, 43, 49, 62, 63, 64, 33, 17** or **13**. The rooks cannot jump pieces.

QUEEN

A queen has the combined powers of the bishop and rook described in this specification.

KING

A king moves one square at a time in any direction. To illustrate, the K_{II} on square **63** may be moved to any of the following squares: **62, 58, 59, 60, 64** or **35**. As in regular chess, the king may not be moved into check.

The manner in which each of the above-described chess pieces captures may be the same as each captures in standard chess.

Thus, there is provided a novel chess game apparatus which is played in three dimensions in a manner closely paralleling the traditional game of chess. The game board provided in the game apparatus is comprised of four vertically spaced-apart layer members, each layer member having 16 squares thereon. Thus, a game board having 64 squares like a standard chess board is provided. The game is for two opponents and a standard set of chess men may be used for playing the game.

While the preferred form of the game board of the present invention has unique application as described, it is nevertheless to be understood that various modifications and changes may be made in the detailed construction and arrangement of elements comprising the preferred form as well as its intended use without departing from the spirit of the present invention. What is claimed is:

1. In a chess game apparatus, a game board comprising:

four layer members, each layer defining an upper horizontal playing surface divided into 16 playing squares, and each layer arranged in a corresponding checkerboard pattern,

supporting means for supporting said layer members in four separate planes and arranged to permit advancement of chess pieces on and between the playing surfaces, alternate ones of the playing squares defined on each of said layer members being distinguishable from the others to form a checkerboard pattern and said layer members being supported by said support means with the alternate ones of the playing squares formed thereon in vertical alignment with one another, and

one set of chess pieces for each opponent, each of said sets of chess pieces having eight pawns, two rooks, two bishops, two knights, one queen and one king, and four pawns of each of said sets of chess pieces being distinctly marked so as to be identifiable from the other pawns of their respective one of said sets of chess pieces.

2. The invention recited in claim **1**, wherein said supporting means are cylindrical members threadedly connected to each of said layer members.

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