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Cluck

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[54] **ELECTRIC CHESS GAME BOARDS**

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[52] **U.S. Cl.**...**273/131 A,** 273/131 AB, 273/131 BA, 273/131 KC, 273/136, 273/136 A, 273/136 C, 273/136 H, 273/136 K, 273/137 A, 273/137 AD

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

[58] **Field of Search**..... 273/137 A, 136 A, 135 A, 273/134 A, 131 A, 131 AB, 130 AB, 130 A

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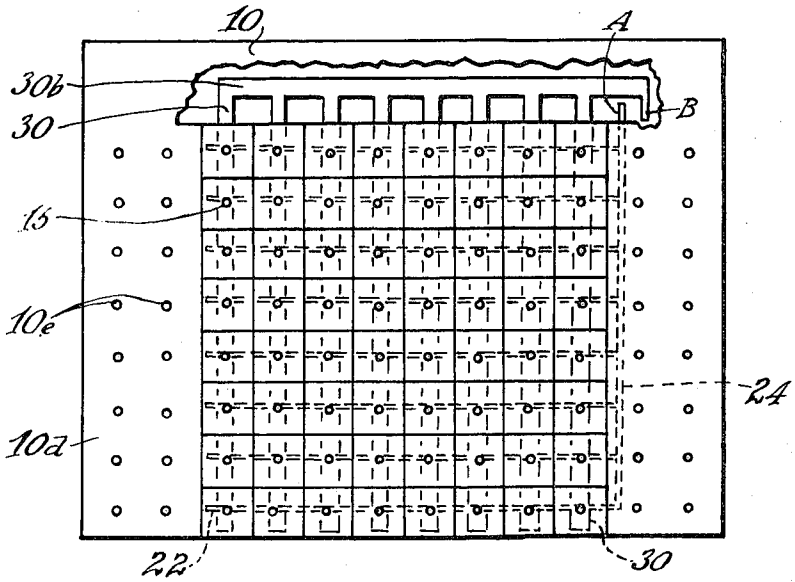
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Primary Examiner—Paul E. Shapiro

[57] **ABSTRACT**

A chess board whose field of squares contains electrical sockets, one in each square. The chess pieces are made with center plugs to connect electrically when deposited to fit the plugs in the sockets; and each chess piece is hollow and of translucent material, with an internal lamp lighted when the chess piece is played. A system of electrical connections is located on the under side of the board; and the latter has a bottom compartment for an electrical power unit.

7 Claims, 5 Drawing Figures



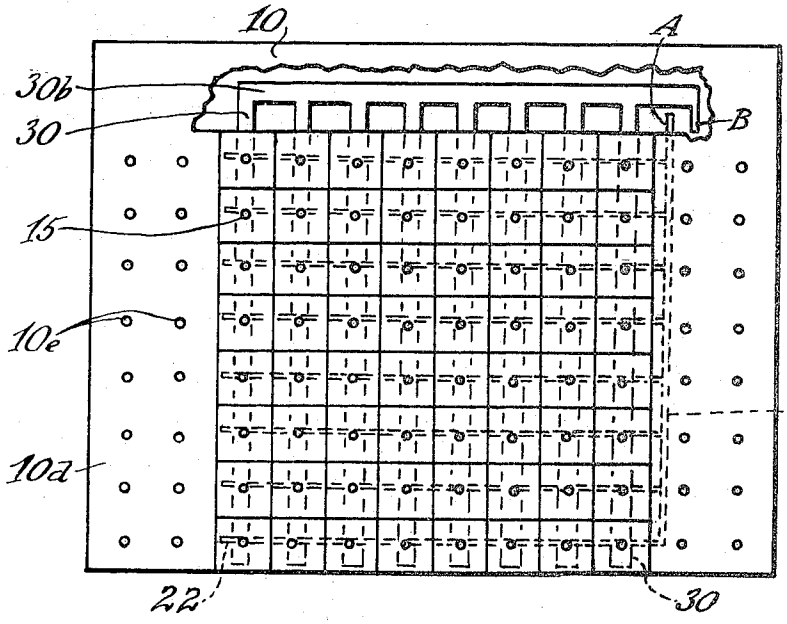


Fig. 1.

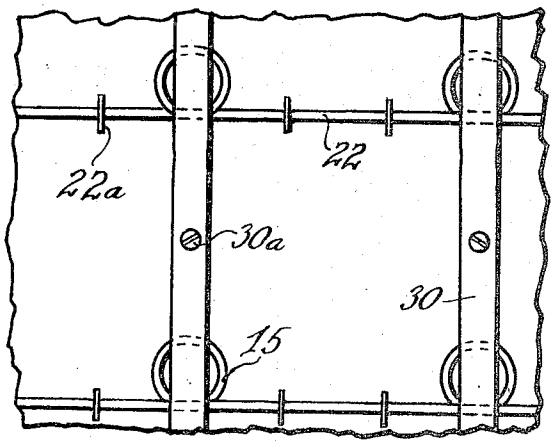


Fig. 2.

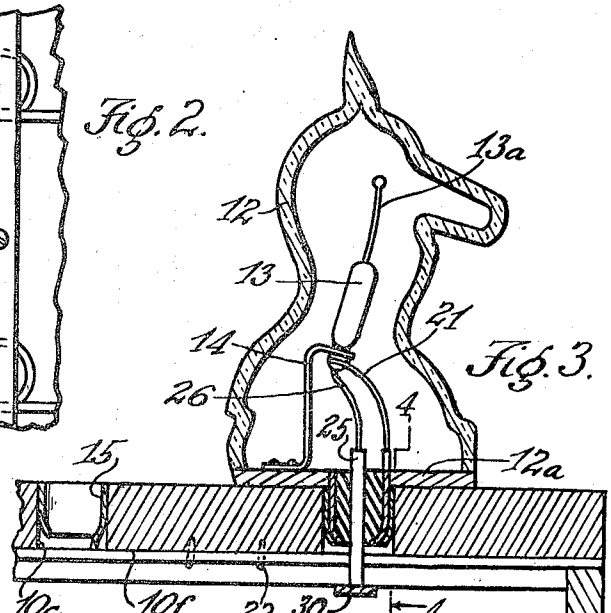


Fig. 3.

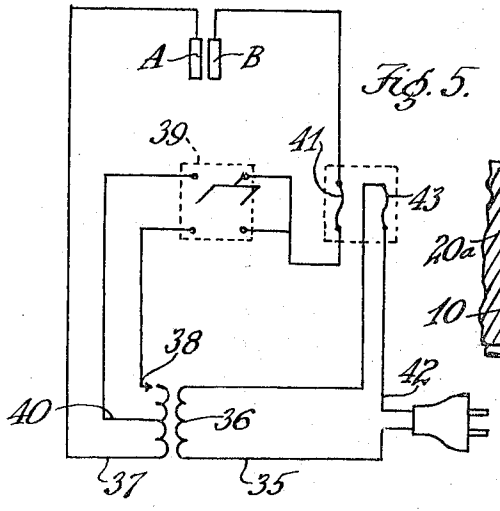


Fig. 5.

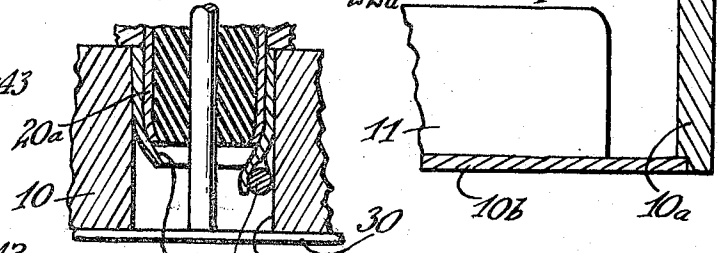


Fig. 4.

ELECTRIC CHESS GAME BOARDS

This invention relates to chess game boards which have factors of illumination. Various lighting effects have been developed within and above chess game boards for purposes of attraction and to define contrasting areas. However, the present invention has for its main object to depart from illuminated board developments, and concentrate illumination in the game pieces.

A further object is to impart illumination in contrasting colors to chess pieces of different categories, whereby to distinguish the pieces instantly and with a fascinating effect.

Another object is to make the chess pieces hollow and with walls of translucent substance in colors corresponding with the categories of the chess pieces.

A still further object is to design the field squares of the chess board with central sockets, and each chess piece with a pendent plug adapted to fit in any chosen socket when the chess piece is played, this establishing an electrical connection to illuminate the chess piece.

A further object is to provide a form of plug-receiving socket which makes the proper lighting connection whichever way the chess piece may face or be turned as it is deposited on a chosen board square.

Another object is to provide a wiring system inside the chess board which may be set to light the chess pieces with a soft glow or a brighter lighting effect.

A final object is to design the chess board with outer areas containing simulated sockets for storing chess pieces which have been captured or are not in use.

A better understanding of the invention may be gained by reference to the accompanying drawing, in which-

FIG. **1** is a plan view of the chess board;

FIG. **2** is a highly-magnified bottom view of a fragment of the board, showing an arrangement of electrical elements;

FIG. **3** is a magnified vertical section of a chess piece deposited on a board area;

FIG. **4** is an enlarged section on the line **4**—**4** of FIG. **3**; and

FIG. **5** is a diagrammatic view of the electrical circuit contained in the game board.

Referring specifically to the drawing, **10** denotes the chess board, which may be made of wood, plastic or any other suitable material, and with the usual field layout of contrasting squares. Since the board must contain the electrical system for the sutomatic illumination of deposited chess pieces, it may be made with a bottom compartment **10***a* and lid **10***b*, as shown in FIG. **3**, to contain a power pack **11**.

The chess pieces applicable to the board are of traditional form, and one — called a knight — is illustrated in FIG. **3** and designated by the numeral **12**. As previously mentioned, each chess piece is hollow and of colored translucent material; and it contains a subminiature lamp **13** on the inside, such lamps having the quality of long life. The lamp may be carried by a bracket **14** secured to the base **12***a* of the chess piece; and the lamp may be extended with fibre-optic tentacles like the one shown at **13***a* and capable of transmitting light in different directions to intensify eyes or other features of the chess piece figure.

The chess board **10** contains the usual number of **64** field squares and has a vertical bore **10***c* in the center of each field square; and each bore contains a metallic socket **15** which takes part in the illumination of a chess piece deposited over the socket. The field is the only area where the illumination of the chess pieces occurs. On opposite sides of the field the board is extended with areas **10***d* which contain simulated non-metallic sockets **10***e* for the deposit of chess pieces which have been captured or are not used, and therefore require no illumination.

Each chess piece **12** is extended downwardly from the center of its base **12***a* with a plug **20** designed to enter a socket **15** when the chess piece is deposited on a chosen field square. The plug is tapered and tightly encircled by a metallic sleeve **20***a*, the latter securing a frictional fit in the socket **15** when the chess piece is deposited. The sleeve is connected by a wire **21** to one terminal of the lamp **13.** The under side of the board **10** is made with a series of parallel grooves **10***f*, one under each horizontal line of sockets **15** as seen in FIG. **1,** to seat a series of metal rods **22**; and a solder connection **23** is made between each rod and its related line of sockets **15** as seen in FIG. **4.** The rods **22** are held in the grooves **10***f* by staples **22***a* driven into the board **10** from the under side; and the rods are joined at one of their ends by a cross-bar **24** ending with a terminal A.

A plug **20** carries a tightly-driven vertical pin **25** in the center. The upper end of the pin is connected by a wire **26** to the other terminal of the lamp **13.** A parallel series of metal strips **30** is located underneath the board **10,** and extends under the transverse rows of the sockets **15** as indicated in FIGS. **1** and **3.** The strips may be secured by screws **30***a* to the bottom surface of the board and by a cross-bar **30***b* as seen in the top portion of FIG. **1**; and one end of the cross-bar is formed with a terminal B adjoining the terminal A. When a chess piece is deposited in place on a board square, the fit of the plug sleeve **20***a* in the particular socket makes one electrical contact for the lamp; and the deposit of the chess piece causes the center pin **25** to engage the strip **30** below it and make the other electrical contact for the lamp. The board is thus wired — when a source of electrical current is connected to the terminals A and B — to light any chess piece when it is played on the board.

The power pack **11** contains an electrical circuit designed to make the electrical system on the board safe in case a short is caused by tampering or the dropping of a metallic object into an open socket **15** to contact a strip **30.** Also, the circuit has a control to operate the lamps either with soft illumination or a bright glow. The circuit is shown in FIG. **5,** and may be briefly described as follows: One side **35** of an 110-volt power line connects with one end of the primary coil of a transformer **36.** A ground lead **37** from one end of the secondary coil connects with the terminal A. An end tap **38** extends from the opposite terminal of the secondary coil to a terminal at one side of a double-throw double terminal switch **39**; and a center tap **40** to the secondary coil connects with the opposite terminal of the switch. The terminals at the other side of the switch are connected in series and extend through a fuse **41** to the board terminal B. The other side **42** of the power line extends through a fuse **43** to connect with the other end of the transformer primary coil. The current entering

the terminals A and B is therefore of low voltage — at about 3 volts — for the soft lighting of the chess pieces. However, when the end tap **38** is connected instead of the center one, the board receives a 6-volt current to light the chess pieces brightly. A small, double-pole switch (not shown) may be located within handy reach from the outside to change the lighting voltage as mentioned.

It will now be apparent that the main feature of the present chess board is the illumination of the chess pieces when played to emit a fascinating glow — with the categories of the chess piece in different colors — and more effectively when the surroundings are darkened. Further, the electric contacting plugs of the chess pieces are centered in relation to the sockets **15,** so that a chess piece always makes the illuminating contact whichever way it may point or face when deposited. Further, the placement of the rods **22** is sunken in the grooves of the board and therefore remote from possible shorting contact with the strips **30.** Further, the direction of these is crosswise in order to lie in the spaces between the staples **22***a*, while the strips **30** extend at a lower level to further reduce the chances of a shorting contact with the rods. Further, the plugs of the chess pieces and the sockets **15** are of a sturdy nature and tapered to make a solid electrical fit. Further, the board is extended with convenient outer areas where chess pieces not in active use may be deposited upright in simulated sockets without need of illumination. Further, the invention is readily applicable to the game of checkers on the same board, simply by making the checker counters of translucent material and arranging their electrical contents to suit. Finally, the improved board makes the chess game more lively because it is easier to locate and select the chess pieces in glowing contrast with the surroundings.

I claim:

1. A game board with a field of squares, playing pieces deposited on desired squares when played, and means actuated by the deposit of any playing piece to illuminate said piece comprising electric sockets contained in said field squares, rods in the bottom of said game board extending in parallelism under said squares and attached to said sockets along said rods, a bar connecting said rods and an electrical circuit with one terminal connected to said bar.

2. The game board according to claim **1** wherein said playing pieces are made of translucent material to glow when illuminated, each piece having at least one illumination device interiorly positioned therein, said pieces glowing whichever way said pieces may face or be turned on said square.

3. The game board according to claim **1** wherein said playing pieces are chessmen.

4. The game board according to claim **1** wherein said playing pieces are checkers.

5. The game board structure of claim **1** further comprising a plug carried by each playing piece to fit the socket on the deposit of the said piece, strips underneath the game board extending in parallelism transversely of said rods, the plugs of the said pieces contacting the strips when the said pieces are deposited in playing position on said squares, a bar connecting the strips, said electrical circuit with a terminal connected to said bar.

6. The game board of claim **5,** said first-mentioned bar connecting the rods at one of their ends, and said second-mentioned bar connecting the strips likewise.

7. The game board of claim **1,** lateral areas extended from said field, and simulated sockets contained in said areas for the deposit of captured or spare chess pieces.

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