Sept. 8, 1953 G. F. WALES 2,651,521

GAME PIECE-WITH PUNCH

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Fig. 1.

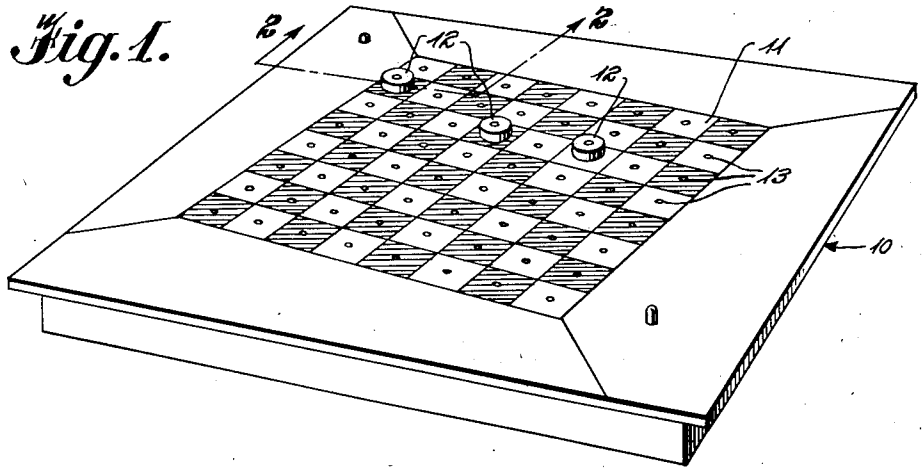


Fig. 2.

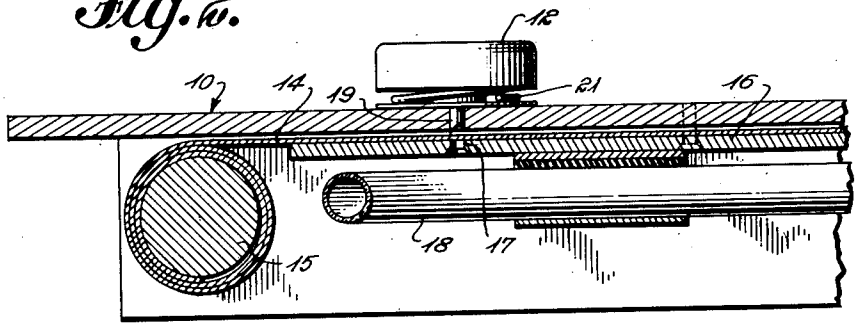


Fig. 3.

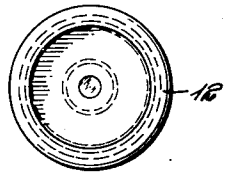


Fig. 5.

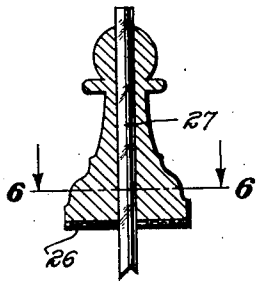


Fig. 6.

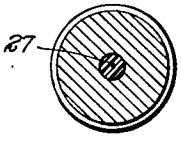
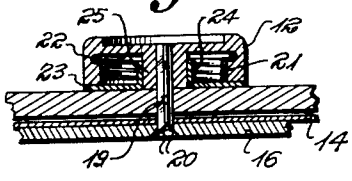


Fig. 4.



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GAME PIECE-WITH PUNCH

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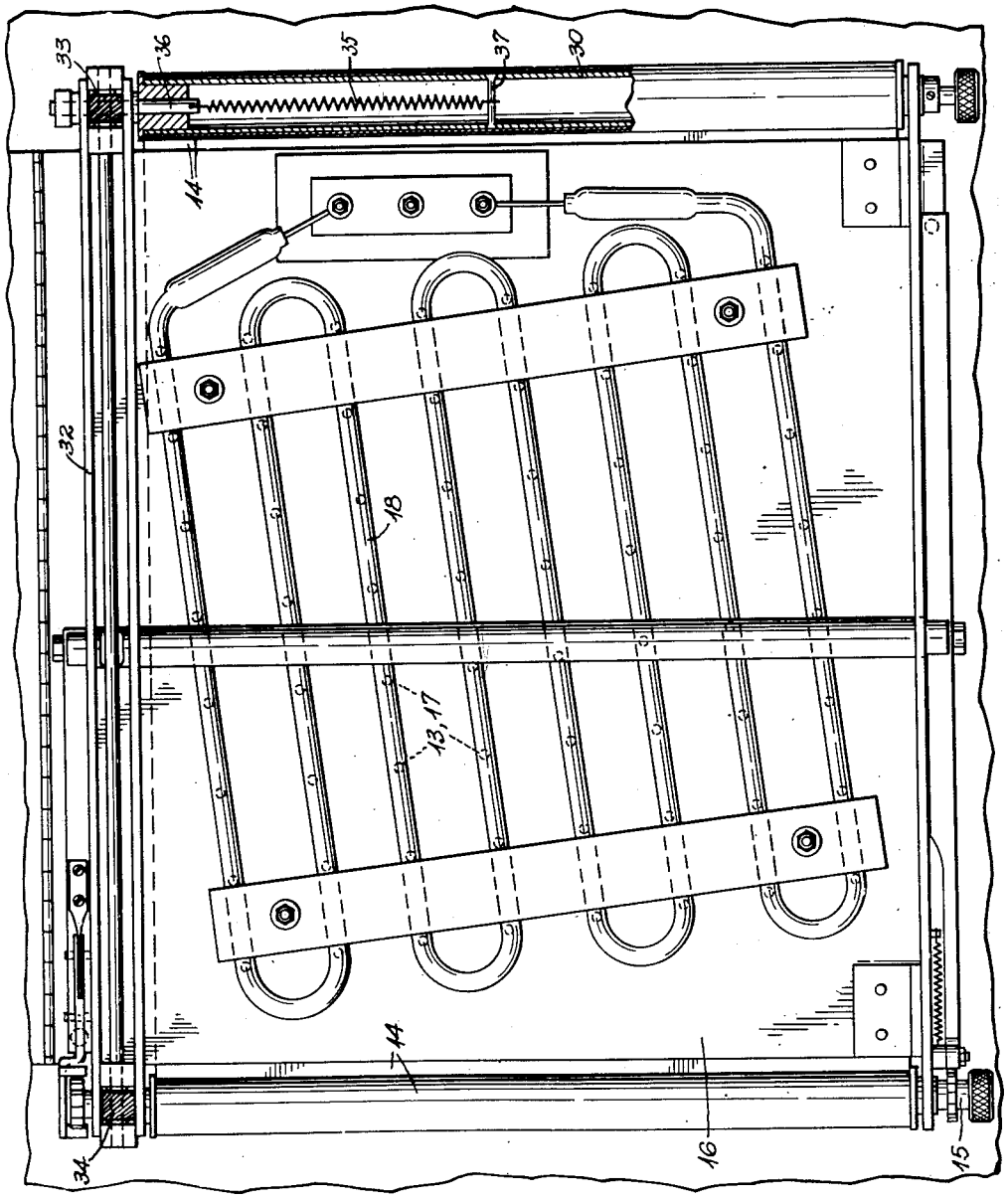


Fig. 7.

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GAME PIECE WITH PUNCH

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Application April 11, 1950, Serial No. 155,150

20 Claims. (Cl. 273—136)

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This invention relates to devices for indicating, illustrating and recording the plays of games of position such as chess, checkers and the like, and more particularly the invention is concerned with the game pieces, or men, employed in connection with such devices.

A game device of the type and for the purpose generally described is disclosed in my co-pending application Serial No. 150,670, now Patent No. 2,647,749, issued August 4, 1953, wherein a game board having a checkered playing area is illustrated and wherein apertures are formed in the game board in the squares of the checkered area. A record form is supported beneath the checkered area in such a manner that it is visible through said apertures, the record form being adapted to be perforated by suitable instruments inserted through said apertures and being movable in a direction which is angularly related with respect to the direction of the columns of squares of the checkered playing area. Thus by perforating the record form to indicate the origin and destination of the playing piece involved in each move, a play-by-play record of any game may be made so that at any subsequent time such game, or moves thereof, may be replayed or indicated exactly as originally played, the game device described being available not only for replaying games recorded on it but also being available for the replaying of games otherwise recorded.

In order to facilitate the replaying of recorded games, the device shown in my co-pending application Serial No. 150,671, now Patent No. 2,647,749, issued August 4, 1953, may be used. This device includes a light source which is located beneath the record form so that when perforations, or light pervious areas, in the record form register with the apertures in the squares of the checkered playing area, light from the light source will pass through said apertures and in so doing indicate the game pieces involved in the various moves, their origin and their destination.

The principal object of the present invention is to provide a game device of the character described which is so designed that the use of game pieces, or men, and their movement upon the playing area of the game board in conventional manner, is permissible and will not reduce to any substantial degree the effectiveness of the device in its capacity as a medium for indicating and illustrating the moves of a game.

A further object is to provide a novel game piece, or man.

A still further object is to provide a game

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piece, or man, which is so designed that it may be utilized to perforate, and thereby produce indicia upon, the record form.

Yet another object is to provide a game piece or man which produces indicia in a record and then indicates that such indicia has been made.

A related object is to provide a game piece or man for recording a game by producing indicia in a record and which, when the game is played back, will indicate that it is the man to be moved from the indicia it produced in the record.

A still further object is to provide a novel design of game piece which embodies the features of the invention but which may, if desired, have the configuration of a conventional game piece.

The invention is illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a game device embodying features of the invention;

Figure 2 is an enlarged detail section taken along line 2—2 of Figure 1;

Figure 3 is a top view of the game piece shown in Figure 1, the game piece being in the form of a checker;

Figure 4 is a fragmentary sectional view showing a game piece depressed to produce a perforation;

Figure 5 is a sectional view of a game piece in the form of a chessman;

Figure 6 is a transverse section taken along line 6—6 of Figure 5; and

Figure 7 is a bottom view of the game device illustrating a specific type of light source, and a feed mechanism for the record form and a take-up arrangement incorporated in one of the feed rolls therefor.

The game apparatus, as illustrated in Figures 1 and 2, includes a game board 10 which is generally similar to the game board disclosed in my aforementioned co-pending application, Serial No. 150,671, the top of the game board having a checkered area 11 suitable for playing checkers and chess thereon. Game pieces, or men, in the form of checkers are indicated at 12. Centrally of each square of the checkered area, the top of the game board is formed with a window, or aperture, 13 through which a record form 14 (Figure 2) is visible, the record form being carried on suitable rolls (one of which is indicated at 15) and being movable between the under side of top of the game board and a die plate 16. The latter is formed with apertures 17 which register with the windows or apertures 13 so that the record form may be perforated by

inserting a punching element through any pair of aligned apertures.

A tubular light source 18 of sinuous shape, such as disclosed more fully in my application Serial No. 150,671 above mentioned, extends back and forth under the rows of perforations in the die plate. This light source comprises a luminescent tube which is suitably secured to the underside of the die plate 16. The tube is so shaped and positioned, as shown in Fig. 7, that the legs thereof will be located below each of the series of aligned perforations or apertures 13 and 17 in the board 10 and die plate 16. It will be apparent, therefore, that with the apertures in the gameboard and die plate located in the relation described, any perforation in the record form which moves into registering relation with a pair of such apertures will result in an unobstructed path through the aligned apertures for light from the light source 18.

The record form or strip is stretched between the rolls 15 and 30. The feed rolls 15 and 30 may be geared together, as described more particularly in my application Serial No. 150,671, above mentioned, by a shaft 32 which drives the spur pinions 33 and 34 that are carried by rolls 30 and 15, respectively. The gearing together of the feed rolls is for the purpose of maintaining the portion of the strip between the rolls under the desired tension so as to insure accuracy in registration of the perforations in the record strip with the aligned apertures 17 and 19 in the die plate 16 and game board 10, respectively. In order to insure such accuracy and at the same time enable build-up of the record on one roll or the other, with the result in variations in the speeds of the two rolls a coil spring 35 is interposed, as shown in Fig. 7, between the roll 30 and the gear 33. The gear 33 is carried by a stub shaft 36 upon which the adjacent end of the roll 30 is freely journaled. The inner end of the stub shaft is connected by the spring 35 to a cross-pin 37 carried by the feed roll 30. The spring 35 is pre-loaded torsionally at the time the record strip is installed. Consequently, the spring 35 is operative to maintain the desired tension upon the section of the record strip between the feed rolls despite variations in the relative circumferential speed of the feed rolls as a result of the buildup on one, or the other, of the record strip as it is advanced for the purpose described. The means for advancing the record strip step by step may be such as disclosed in application Serial No. 150,671, above mentioned, and need not be described here in detail.

As disclosed in my co-pending application Serial No. 150,671, the record form 14 may be perforated to record play-by-play, and in the proper sequence, the moves of a game. Hence such games, or moves thereof, may be replayed at any time by advancing the record form in the device in the same manner that it was advanced during recording of the original game and moving the game pieces, or men, as indicated by the record form, it being noted that whenever a perforation in the record form registers with a window or aperture in the top of the game board, light from the light source 18 will pass through the window or aperture to the eyes of the players and thereby indicate that the particular square having the illuminated window or aperture corresponds to the origin or destination of the particular move which is represented.

In accordance with the invention, the game pieces themselves carry the punching elements so that the record form 14 may be perforated in the manner and for the purpose described as the game pieces are moved from position to position. As best shown in Figures 2 and 4, a punching element, indicated at 19, is carried by each of the game pieces 12. The punching element extends below the game piece and is adapted to be inserted in any pair of aligned apertures in the top of the game board and the die plate, the leading end of the punching element preferably being formed to present angularly inclined edges 20 so that as the game piece is placed in position, the punching element carried thereby may be made to pass through the record form with a shearing action and in so doing produce a perforation. In order that the punching element will be automatically retracted after a perforation has been made and so that the record form may be advanced between recording operations, the game piece preferably carries a stripping spring 21. The upper convolution of the latter has an expanded fit in an internal groove 22 in the marginal flange on the game piece while the lower convolution of the spring is welded, or otherwise secured to the top side of a washer 23. A collar 24 on the latter has a sliding fit on the hub 25 of the game piece. The parts are so designed that when the washer 22 is resting on the top of the game board, the spring 21 is operative to support the lower end of the punching element above and out of contact with the record form as shown in Figure 2, it being understood that in making a perforation in the record form in the manner described the game piece is depressed, as shown in Figure 4, to compress the spring 21 and in so doing cause the punching element to perforate the record form. Upon release of the game piece, the spring 21 automatically withdraws the punching element from the record form and restores it to the position shown in Figure 2.

The game piece illustrated in Figures 5 and 6 is in the form of a chessman, the base of the game piece carrying a felt pad 26. In this embodiment also, the punching element which is indicated at 27 provides means for perforating the record form as the game piece is moved from position to position, although an automatic stripping spring is not employed in connection with the punching element. The punching element 27 is fixed in, and held against relative axial movement with respect to, the body of the game piece. However, by forming the punching element so that it has a snug fit in the aligned perforations in the top of the game board and the die plate, the game piece may be manually retracted, after it has been manipulated to produce a perforation in the record form, far enough to withdraw the punching element from out of contact with the record form. Then when the game piece is released, the frictional engagement between the punching element and the walls of the aligned perforations which it occupies will be adequate to support the game piece in such elevated position.

Preferably, the game pieces, or men, are so designed that they may be employed without interfering to any material degree with the passage of light from the light source 18 to the eyes of the players when the device is employed for indicating and illustrating purposes in connection with a previously recorded game. To this end, the punching elements 19 and 27 extend through the game pieces, as illustrated and are availed of as light-transmitting conduits, the

bodies of the game pieces preferably being opaque while the punching elements are transparent or tubular. Both the bodies and the punching elements of the game pieces may, if desired, be formed of a suitable plastic.

From the foregoing, it will be apparent that the game pieces described may be availed of to produce a play-by-play record of a game, while also being available for indicating and illustration purposes in connection with a record form which carries a recorded game, or moves thereof, in substantially the same manner as disclosed in my copending application Serial No. 150,671. When employed for the latter purpose, it will be apparent that the punching elements carried by the game pieces will permit the passage through them of light from the source 18 so that the moves and men involved may be indicated. This feature is of value in recording a game as the emanation of light from the man, when recording indicates that the move has been recorded and that the paper slug has been forced out of the record against electrostatic and other forces tending to hold it in place. The punching elements of the game pieces, therefore, have secondary functions, namely, providing means for piping light through the game pieces and also providing means for holding the game pieces against accidental displacement on the game board.

The specific type of game board and the specific forms of game pieces illustrated and described in connection with the game board are intended by way of example and not by way of limitation, it being apparent that the advantages of the invention may be obtained with various kinds of game boards and game pieces.

I claim as my invention:

1. A game device of the character described for a game of position, comprising a game board marked off in a plurality of spaces designating positions for the gamepieces and having apertures arranged in a pattern corresponding to positions which game pieces may occupy during play of a game, a record form which is movable under said game board, a game piece, and indicia-producing means carried by said game piece which may be inserted through said apertures to act on said record form.

2. A game device of the character described for a game of position, comprising a game board marked off in a plurality of spaces designating positions for the gamepieces and having apertures arranged in a pattern corresponding to positions which game pieces may occupy during play of a game, a record form which is movable under said game board, a game piece, and a punching element carried by said game piece which may be inserted through said apertures to perforate said record form.

3. A game piece of the character described for use in playing a game of position such as chess, checkers, and the like, said game piece carrying a light-transmitting, indicia-producing element.

4. A game piece of the character described for use in playing a game of position such as chess, checkers, and the like, said game piece having a punching element reciprocable therein which is projectable beyond the base of said gamepiece for producing perforations in a record form that is secured to the gameboard on which the gamepiece is used.

5. A game piece of the character described for use in playing a game of position such as chess, checkers, and the like on a gameboard which is marked off in a plurality of spaces, designating positions for the game pieces, said game piece having a light-transmitting punching element reciprocable therein which is projectable beyond the base of said gamepiece for producing perforations in a record form that is secured to the gameboard on which the gamepiece is used.

6. A game piece of the character described, comprising a body member, a punch reciprocably mounted in said body member, a base member, and compressible resilient means interposed between said body and base members constantly urging said punch inwardly with reference to said body member, said means being compressible to permit said punch to be projected downwardly with relation to said base member and being automatically operative when released to retract said punch with relation to said base member.

7. A game piece of the character described comprising a body member, a light-transmitting punch reciprocably mounted in said body member, a base member, and compressible resilient means interposed between said body and base members constantly urging said punch inwardly with reference to said body member, said means being compressible to permit said punch to be projected downwardly with relation to said base member and being automatically operative when released to retract said punch with relation to said base member.

8. A game device of the character described for a game of position, comprising a game board marked off in a plurality of spaces designating positions for the gamepieces and having apertures arranged in a pattern corresponding to positions which game pieces may occupy during play of a game, a record form which is movable under said game board, a game piece, an indicia-producing element carried by said game piece which may be inserted through said apertures to act on said record form, and means for normally holding said element out of contact with said record form.

9. A game device of the character described for a game of position, comprising a game board marked off in a plurality of spaces designating positions for the gamepieces and having apertures arranged in a pattern corresponding to positions which game pieces may occupy during play of a game, a record form which is movable under said game board, a game piece, a punching element carried by said game piece which may be inserted through said apertures to perforate said record form, and resilient means for normally holding said element out of contact with said record form.

10. A game device of the character described for a game of position, comprising a game board marked off in a plurality of spaces designating positions for the gamepieces and having apertures arranged in a pattern corresponding to positions which game pieces may occupy during play of a game, a record form which is movable under said game board, a light source located under said record form, a light-transmitting game piece, and indicia-producing means carried by said game piece which may be inserted through said apertures to perforate said record form.

11. A game device of the character described for a game of position, comprising a game board marked off in a plurality of spaces designating positions for the gamepieces and having apertures arranged in a pattern corresponding to positions which game pieces may occupy during play of a game, a record form which is movable

under said game board, a light source located under said record form, a game piece, and a light-transmitting punching element carried by said game piece which may be inserted through said apertures to perforate said record form.

12. A game piece for use in playing a game of position such as chess, checkers, and the like on a gameboard which is marked off in a plurality of spaces designating positions for the gamepieces and which is equipped with a record form for recording movements of the gamepieces, said gamepieces having a light-transmitting core which extends therethrough from top to bottom, one end of said core being formed to produce indicia upon said record form.

13. A game piece for use in playing a game of position such as chess, checkers, and the like, on a gameboard which is marked off in a plurality of spaces designating positions for the gamepieces and which is equipped with a record form for recording movements of the gamepieces, said gamepiece having a light-transmitting core which extends therethrough from top to bottom, one end of said core normally extending below the base of the game piece to provide a punch, said core being retractable into the gamepiece above the base thereof to permit movement of the gamepiece on said gameboard.

14. A game piece for use in playing a game of position such as chess, checkers, and the like, on a gameboard which is marked off in a plurality of spaces designating positions for the gamepieces and which is equipped with a record form for recording movements of the gamepieces, said gamepiece having an opaque body and a central light-transmitting core which extends therethrough from top to bottom, one end of said core normally extending below the base of the game piece to provide a punch, said core being retractable into the gamepiece above the base thereof to permit movement of the gamepiece on said gameboard.

15. A game device for a game of chess, checkers, and the like, comprising a support, a gameboard carried by said support and marked off in a plurality of playing spaces and having a plurality of apertures extending therethrough in a pattern corresponding to positions to which gamepieces may be moved on said spaces, a record form which is mounted on said support for movement under said gameboard, said record form being adapted to have apertures provided therein to indicate moves of gamepieces, a light-transmitting gamepiece for use on said gameboard, and a light source mounted on said support beneath said record form so that light may pass through the apertures in said record strip, the apertures in said gameboard, and said gamepiece, when aligned.

16. A game device for a game of chess, checkers, and the like, comprising a support, a gameboard carried by said support and marked off in a plurality of playing spaces and having a plurality of apertures extending therethrough in a pattern corresponding to positions to which gamepieces may be moved on said spaces, a plate mounted on said support parallel to and beneath said gameboard and having apertures aligned with the apertures in said gameboard, a record form mounted on said support to be movable between said gameboard and said plate, and a gamepiece for use on said gameboard, a perforating element mounted in said gamepiece and movable therein to project it downwardly into the apertures in said gameboard and said plate to thereby perforate said record form, said perforating element being retractable to disengage it from the record form and from said plate while leaving it engaged in an aperture in said gameboard, and said perforating element being further retractable to disengage it from said gameboard to permit the gamepiece to be moved on said gameboard.

17. A game device for a game of chess, checkers, and the like, comprising a support, a gameboard carried by said support and marked off in a plurality of playing spaces and having a plurality of apertures extending therethrough in a pattern corresponding to positions to which gamepieces may be moved on said spaces, a plate mounted on said support parallel to and beneath said gameboard and having apertures aligned with the apertures in said gameboard, a record form mounted on said support to be movable between said gameboard and said plate, and a gamepiece for use on said gameboard, a perforating element mounted in said gamepiece and movable therein to project it downwardly into the apertures in said gameboard and said plate to thereby perforate said record form, and resilient means for normally holding said perforating element out of contact with said record form and said plate while said perforating element remains engaged in a perforation of said gameboard, said perforating element being retractable to disengage it from said gameboard to permit the gamepiece to be moved on said gameboard.

18. A game device for a game of chess, checkers, and the like, comprising a support, a gameboard carried by said support and marked off in a plurality of playing spaces and having a plurality of apertures extending therethrough in a pattern corresponding to positions to which gamepieces may be moved on said spaces, a plate mounted on said support parallel to and beneath said gameboard and having apertures aligned with the apertures in said gameboard, a record form mounted on said support to be movable between said gameboard and said plate, and a gamepiece for use on said gameboard, a perforating element mounted in said gamepiece and movable therein to project it downwardly into the apertures in said gameboard and said plate to thereby perforate said record form, said perforating element being light-transmitting and being retractable to disengage it from the record form and from said plate while leaving it engaged in an aperture in said gameboard, said perforating element being also further retractable to disengage it from said gameboard to permit the gamepiece to be moved on said gameboard, and a light source mounted on said support beneath said plate so that light may pass through apertures in said plate, record form, and gameboard and through said perforating element, when aligned.

19. A game device for a game of chess, checkers, and the like, comprising a support, a gameboard carried by said support and marked off in a plurality of playing spaces and having a plurality of apertures extending therethrough in a pattern corresponding to positions to which gamepieces may be moved on said spaces, a plate mounted on said support parallel to and beneath said gameboard and having apertures aligned with the apertures in said gameboard, a record form mounted on said support to be movable between said gameboard and said plate, and a gamepiece for use on said gameboard, a perforating element mounted in said gamepiece and movable therein to project it downwardly into the apertures in said gameboard and said plate to

thereby perforate said record form, resilient means for normally holding said perforating element out of contact with said record form and said plate while said perforating element remains engaged in a perforation in said gameboard, said perforating element being retractable to disengage it from said gameboard to permit the gamepiece to be moved on said gameboard, said perforating element being also light-transmitting, and a light source mounted on said support beneath said plate so that light may pass through apertures in said plate, record form, and gameboard and through said perforating element, when aligned.

20. A gamepiece of the character described for use in playing a game of position such as chess, checkers, and the like on a gameboard which is marked off in a plurality of spaces designating positions for the gamepieces and which is equipped with a record form for recording movements of the gamepieces, said gamepiece having a flat base adapted to seat on the gameboard and to be moved thereover, and having an indicia-producing element which is movably mounted in the gamepiece to be projected below said base to record the position of the gamepiece on said record form.

GEORGE F. WALES.

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