

[54] **ELECTRICAL CROSSWORD PUZZLE**
[76] Inventors: **Brian R. Forsyth**, 8105 Camino Del Sol, La Jolla, Calif. 92037; **Corey D. Rand**, 8555 Sherwood Dr., West Hollywood, Calif. 90069

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[51] Int. Cl. **A63f 9/18**
[58] Field of Search..... **273/156, 157 R, 136 A, 273/137 A; 35/35 D, 9 D**

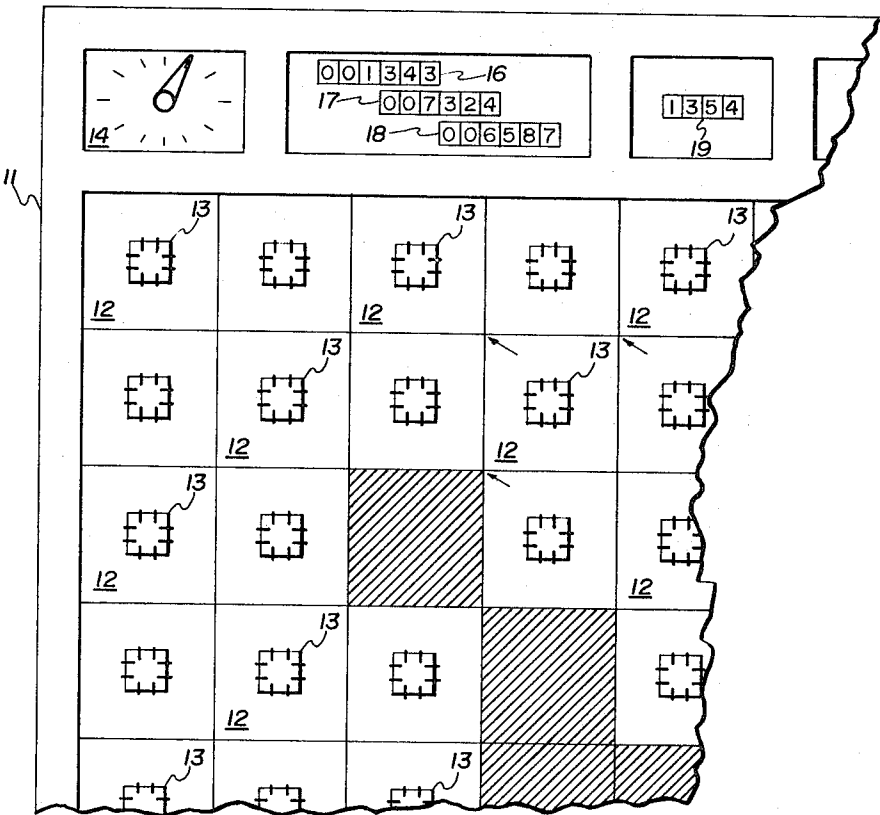
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Primary Examiner—Anton O. Oechsle
Attorney, Agent, or Firm—Richard K. Macneill

[57] **ABSTRACT**
An electrical crossword puzzle in which each letter square contains a plurality of coded electrical contacts which cooperate with electrical contacts on a letter block if the correct letter block is selected. A correct letter counter with an indicator lamp is coupled to the contact of the square and letter together with a word scoring counter when a word is completed in both horizontal and vertical directions, and a number of tries counter indicating the number of attempts at letter selection, together with a timer for indicating the period of time required for completion of the puzzle.

3 Claims, 5 Drawing Figures



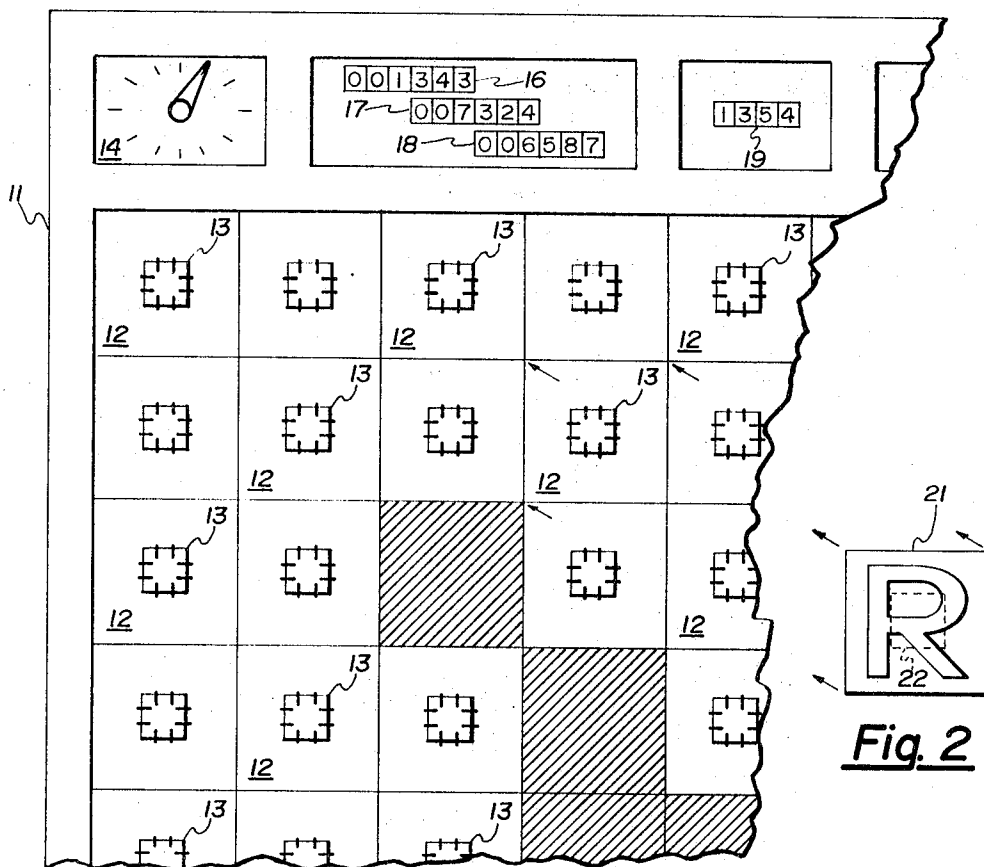


Fig. 1

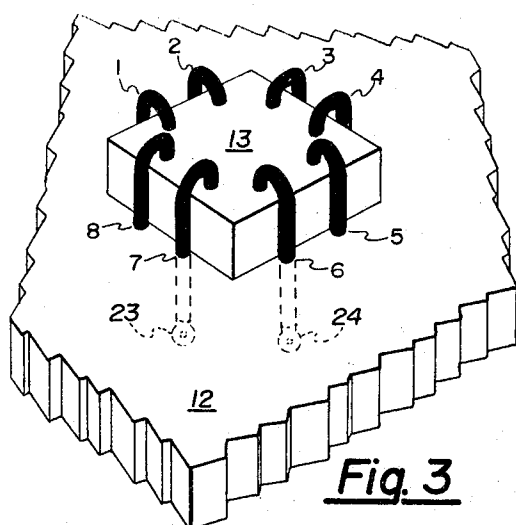


Fig. 3

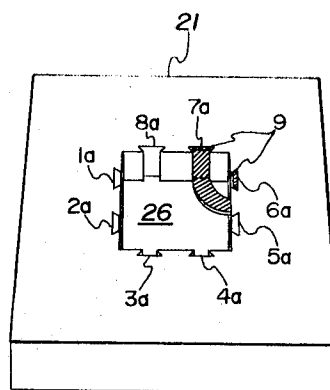
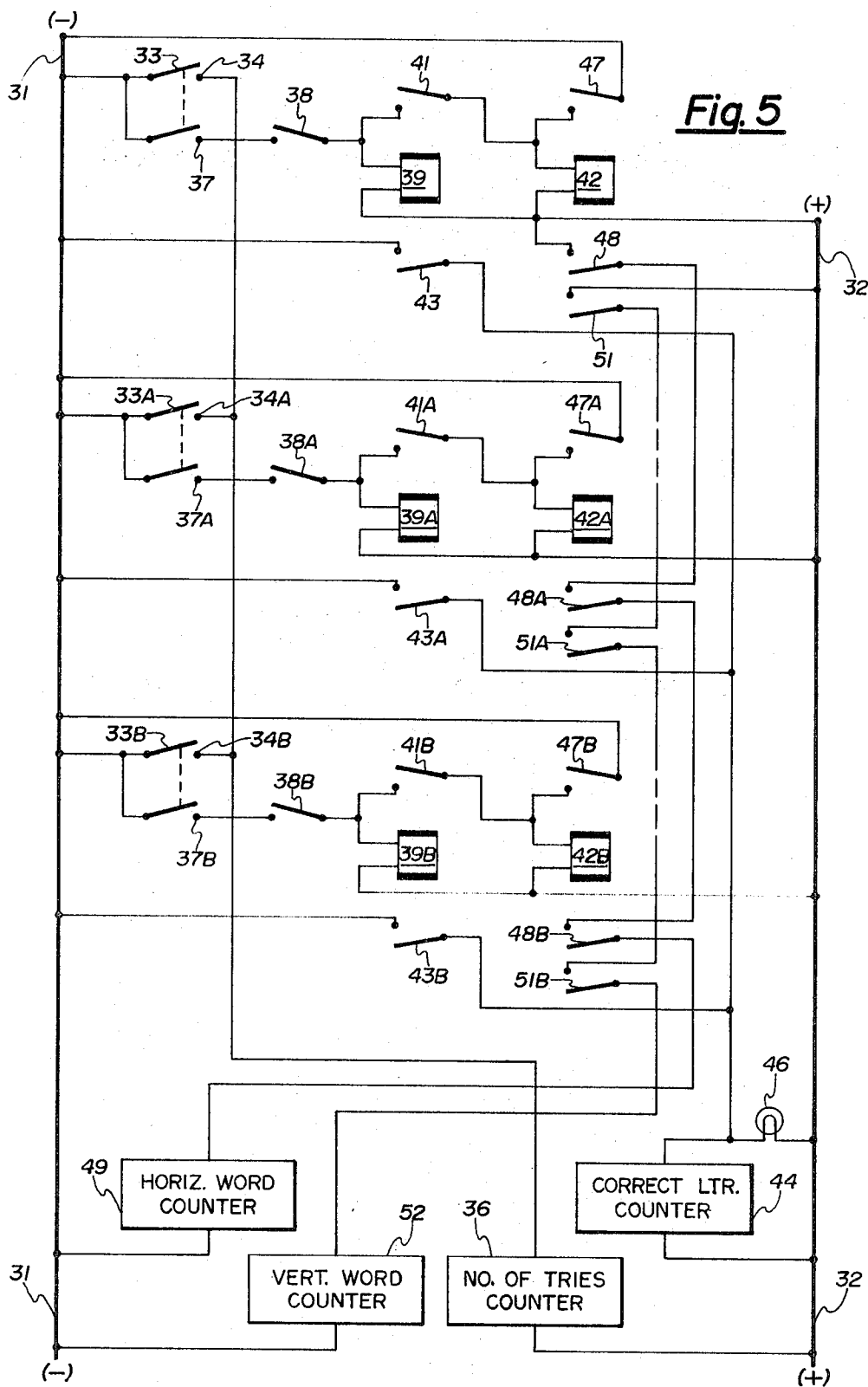


Fig. 4



ELECTRICAL CROSSWORD PUZZLE

BRIEF DESCRIPTION OF THE INVENTION

The present invention relates to an electrical crossword puzzle, and more particularly to an electrical crossword puzzle with automatic scoring features.

According to the invention, an electrical crossword puzzle is provided having a plurality of letter squares on a game board, each square containing a plurality of electrical contacts. A plurality of letters are provided for attachment to the letter squares, the letters having electrical contacts for cooperation with these letter square contacts if the correct letter is selected. At this time a correct letter counter can be actuated for counting the number of correct letters selected. A number of tries counter is preferably included for recording the total number of tries, both correct and incorrect, and a horizontal and vertical word counter can be included for counting the number of correct horizontal and vertical words completed. A timer can be utilized for timing the period of time required for a given completion of the puzzle.

An object of the present invention is the provision of an electrical crossword puzzle.

Another object of the present invention is the provision of an electrical crossword puzzle with a number of correct letters selected counter.

A further object of the present invention is the provision of an electrical crossword puzzle with horizontal and vertical word completion counters.

Yet another object of the invention is the provision of an electrical crossword puzzle with a total number of tries counter.

Other objects and many of the attendant advantages of the present invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings in which like reference numerals designate like parts throughout the Figures thereof and wherein:

FIG. 1 is a schematic representation of a game board of the present invention;

FIG. 2 is a top view of a letter for utilization with the game board of FIG. 1;

FIG. 3 is a perspective illustration of a contact protrusion of the game board of FIG. 1;

FIG. 4 is a back view of the letter of FIG. 2 illustrating contacts thereon; and

FIG. 5 is a schematic representation of the scoring circuit of the present invention.

DETAILED DESCRIPTION OF THE DRAWING

Referring to FIG. 1, a game board utilized with the present invention is shown at 11 having a plurality of word squares 12, each of said word squares having an electrical contact block 13 thereon. Above the word square section a timer 14, a letter score count 16, a horizontal word score count 17 and a vertical word score count 18 are provided. A number of tries counter is shown at 19.

Referring to FIG. 2, an individual letter block is shown at 21 indicating the letter R with a contact receptacle shown on dotted lines at 22.

Referring to FIG. 3, a fragmented section of the game board is again shown at 11 having a raised contact section 13 with a plurality of contacts indicated as 1, 2, 3,

4, 5, 6, 7 and 8 thereon. In this particular letter, contacts 6 and 7 are coupled to terminals 23 and 24.

Referring to FIG. 4, the back of letter 21 is shown having a socket 26 with receptacles 1A, 2A, 3A, 4A, 5A, 6A and 7A. Here it is seen that a metallic shorting segment 9 shorts receptacles 6A and 7A which when placed in cooperative relationship with the contact block 13 of FIG. 3, will result in a shorting of contacts 6 and 7 of contact block 13 of FIG. 3, and the shorting of output terminals 23 and 24. Hence, this would indicate a correct letter selection as will be indicated below. Each letter will have a different pair of contacts corresponding to the programmed contacts of the contact blocks 13 on playing board 11. If the correct letter is selected, it will result in a pair of contacts being shorted together that are brought out to a scoring circuit. The following shorting code is illustrative of a 26-letter arrangement which can utilize eight pins:

A-12	N-34
B-13	O-35
C-14	P-36
D-15	Q-37
E-16	R-38
F-17	S-45
G-18	T-46
H-23	U-47
I-24	V-48
J-25	W-56
K-26	X-57
L-27	Y-58
M-28	Z-67

Referring to FIG. 5, the scoring circuit will be described. Input buses 31 and 32 supply the power of the scoring system. This can be AC or DC depending on the type of components utilized. Incoming bus 31 is coupled to pushbutton switches 33, 33A and 33B. Contacts 34, 34A and 34B of pushbutton switches 33, 33A and 33B, respectively, are all connected together and to an input of number of tries counter 36. The other side of number of tries counter 36 is coupled to bus 32. Contacts 37, 37A and 37B of switches 33, 33A and 33B, respectively, are coupled to letter switches 38, 38A and 38B, respectively. The other side of letter switches 38, 38A and 38B are coupled to solenoids 39, 39A and 39B. The other sides of solenoids 39, 39A and 39B are coupled to power bus 32. Solenoids 39, 39A and 39B have contacts 41, 41A and 41B, respectively, connected between one side of solenoids 39, 39A and 39B, respectively, and solenoids 42, 42A and 42B, respectively. Contacts 43, 43A and 43B of solenoids 39, 39A and 39B, respectively, are coupled between bus 31 and correct letter counter 44. The other side of correct letter counter 44 is coupled to bus 32. A correct letter light 46 is coupled across correct letter counter 44.

Holding contacts 47, 47A and 47B of solenoids 42, 42A and 42B, respectively, are coupled between one end of solenoids 42, 42A and 42B and power bus 31. Horizontal word contacts 48, 48A and 48B of solenoids 42, 42A and 42B, respectively, are connected in a serial relationship between power bus 32 and horizontal word counter 49. The other side of horizontal word counter 49 is connected to power bus 31. Vertical word counter contacts 51, 51A and 51B of solenoids 42, 42A and 42B, respectively, are connected in series between power bus 32 and vertical word counter 52. The other side of vertical word counter 52 is connected to power bus 31.

OPERATION

To begin with, it is pointed out that in the electrical diagram of FIG. 5, the relays could be replaced by solid state computer logic but is illustrated with relay logic for simplicity and clarity. In this illustration, each letter would have a pushbutton switch in the 33 series and a letter contact switch which is indicated as a 38 series. These are represented by the contacts on block 13 of FIGS. 1 and 3 and the shorting contacts on the letter block 21, and would only be closed when a correct letter has been selected. Each square of the crossword puzzle would also have two relays associated therewith indicated in the 39 series of solenoids and the 42 series of solenoids. Hence, in operation, a letter block is selected and placed on the letter square on playing board 12. At this time a pushbutton associated with that letter square is depressed which, for example, could be a pushbutton number 33 in FIG. 5. Contact 34 will then apply power to the number of tries counter 36 which will register a try. If the correct letter has not been selected, switch 38 will not be closed and nothing further will happen. If, however, the correct letter has been selected, switch 38 will be closed and when pushbutton 33 is depressed, contact 37 will apply power from bus 31 and letter switch 38 to solenoid 39 which will actuate solenoid 39. Contact 43 of solenoid 39 will then apply power from bus 31 to correct letter counter 44, and lamp 46 will light, indicating the selection of a correct letter. Contact 41 of solenoid 39 will energize solenoid 42 and holding contact 47 will keep solenoid 42 energized. Horizontal and vertical word contacts 48 and 51 will close and remain closed as long as solenoid 42 is actuated.

At this time, if a letter representing switch 38A is selected (it being assumed that it will be the next letter in a given word, horizontal or vertical), switch 38A will be closed, and when pushbutton 33A is depressed, the same activity will take place with regard to the contacts of solenoids 39A and 42A as was described with respect to solenoid 39 and 42 above. At this time horizontal word contacts 48A and 51A are closed which are in series with contacts 48 and 51 of solenoid 42. Further assuming that the next letter in a three-letter word is represented by switch 38B when it is placed on the playing board and the contact has been made, switch 38B will be closed and the same activity takes place when pushbutton 33B is depressed. When horizontal word contact 48B and vertical word contact 51B of solenoid 42B are closed, they will place horizontal

word counter 49 and vertical word counter 52 across buses 32 and 31, resulting in a word count. It is pointed out here that obviously both the horizontal and the vertical word count would not be obtained from the same word but this is illustrative in showing the general hook-up of the scoring circuit in each direction.

When the puzzle is complete, the total score can be weighted by the number of tries and the time required for completion, or in the alternative, a set time can be selected and the count weighted by merely the number of tries, whether the puzzle is complete or not.

It should be understood, of course, that the foregoing disclosure relates to only a preferred embodiment of the invention, and that it is intended to cover all changes and modifications of the example of the invention herein chosen for the purposes of the disclosure which do not constitute departures from the spirit and scope of the invention.

The invention claimed is:

1. An electrical crossword puzzle comprising:

a game board;

a plurality of letter squares arranged in horizontal and vertical arrays to form horizontal and vertical word units on said game board;

a plurality of coded electrical contacts on each of said letter squares;

a plurality of letter blocks adapted for being received on said letter squares;

a plurality of electrical contacts on said letter blocks

geometrically disposed and coded for cooperation with said plurality of coded electrical contacts on said letter squares; and

electrical scoring means coupled to said electrical contacts on said letter squares, said scoring means including a counting means for indicating the number of completed correct horizontal word units and counting means operable for indicating the number of completed correct vertical word units.

2. The electrical crossword puzzle of claim 1 and further including:

a switch coupled to at least one of said plurality of coded electrical contacts on each of said letter squares; and

counting means coupled to said switch for indicating the total number of tries.

3. The electrical crossword puzzle of claim 2 wherein:

said switch includes contacts operable for energizing said electrical scoring means.

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