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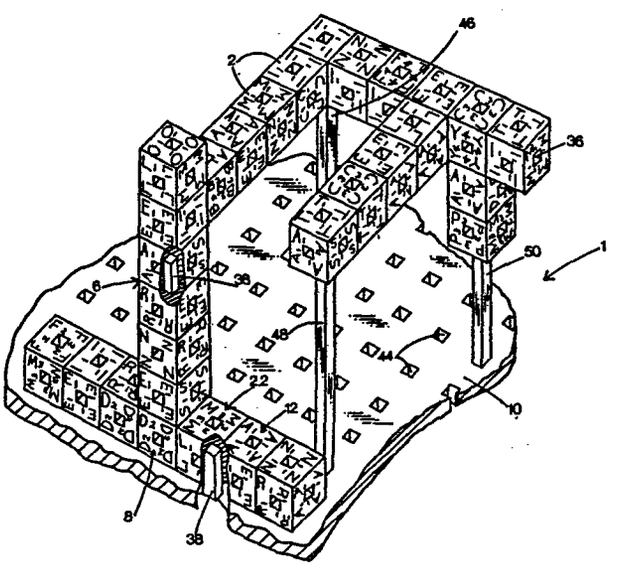
(54) Apparatus for playing a three dimensional word game.

(57) An apparatus (1) for playing a word game includes a plurality of cubes (2, 4) having indicia representing letters on each side of each cube. There is an aperture (36, 40, 42) at the centre of each side of each cube. Each of a plurality of pegs (38) is closely receivable in each of the apertures of each cube for connecting the cubes together to form words with the letters.



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BACKGROUND OF THE INVENTION

The invention relates to an apparatus for playing a three dimensional word game.

Various word games have been developed in which players attempt to build words by arranging members on which letters are printed. The most popular game is likely that sold under the trade mark SCRABBLE. In this game, a game board is marked into squares. Each player has a plurality of blocks with a letter printed on top. A player begins by placing a number of his blocks on the squares of the board in a single line such that the letters spell a word. In subsequent moves, the players attempt to make additional words by adding rows of letters along the board extending from a letter of a word previously made on the board. The play is two dimensional with words being built parallel to the original word or at right angles to it.

Earlier patents have disclosed lettered blocks having pegs and apertures permitting them to be stacked vertically or extending in horizontal rows. This structure is found in United States patent #176,144 to McDougall, however each block has only one letter, thus different words cannot be spelt on different sides of blocks forming a row. In addition, each peg of this reference is fixed in position and thus limits the possible connections between adjacent blocks.

United States patent #4,019,743 to Castanis , United States patent #3,930,651 to Rader, United States patent #2,886,325 to Long and United States patent #4,165,077 to Falcione disclose three dimensional word games. Other such three dimensional word games are found in United States patent #3,692,310 to Martin, #3,751,039 to Dykoski and United States patent #3,827,695 to Hess.

SUMMARY OF THE INVENTION

According to the invention, an apparatus for playing a word game comprises a plurality of cubes having indicia representing letters on each side thereof. There is an aperture at the center of each side

of each cube. Each of a plurality of peg means is closely receivable in each aperture for connecting the cubes together to form words with the letters.

Preferably, the peg means and the apertures are non-circular in transverse section to prevent rotation of the cubes about the peg means.

The cubes preferably have indicia representing a different letter on each side of the cube.

The apparatus may also have a game board with a plurality of apertures spaced-apart in a grid arrangement to receive peg means of adjacent cubes on the board.

There may be supports for extending between the apertures of the board and cubes spaced above the board to support cubes above the board.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

Figure 1	is an isometric view of an apparatus for playing a word game according to an embodiment of the inventions including a fragmentary view of the board;
Figure 2	is an isometric view of an alternative cube for the apparatus of Figure 1;
Figure 3	is a sectional view along line 3-3 of Figure 2;
Figure 4	is an opened-up isometric view of a cube similar to those of Figure 1;

Figure 5 is a simplified isometric view of the game board of Figure 1 with a row of cubes arranged thereon; and

Figure 6 is an isometric view of a plurality of cubes arranged in a horizontal row resting on top of a plurality of cubes arranged in a vertical column.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figure 1 illustrates an apparatus 1 for playing a word game. The most important part of the apparatus is a plurality of cubes 2, each having indicia representing letters on each side thereof. Each cube has a different letter on each face as may be observed by reference to Figure 4 which shows a similar cube with the hidden sides opened up to show the letters. The cube is provided with means on each side such that at least one letter on each side is upright when the side is vertical. In this embodiment, this means is the provision of four different letters near the four corners of each side. For example, cube 2.1 of Figure 4 has four letters "B" on front side 4. This permits the players to easily read the letters regardless of how the block is turned in play. Of course, in play, side 4 may appear in a horizontal position. The provision of the four letters on each side oriented in different directions assures that one of the letters will be oriented in the proper direction for making a word. Referring for example, to Figure 1, each block in the vertical column 6 has an upright letter in the upper left hand corner oriented for proper reading of the word "LEARNED" reading downwardly from the top of the column. Likewise, a horizontal row 8 comprising the vertical sides of cubes adjacent game board 10 form the word "MEDDLER" easily read by reading the letters in the upper left hand corner of each side. Again, referring to the three blocks adjacent the board closest to the observer, the horizontal row 12 formed by the top horizontal sides of these three blocks spell the word "MAN". The letters are read at the upper left hand corner from the point of view of the observer. It is clear that when the letters are oriented as shown, the letters always appears upright to the observer at the upper left hand corner from his point of view.

Referring to Figure 2, this shows a cube 14 having alternative means on each side for providing at least one upright letter on each vertical side of the cube. In this case, such means is provided by a rotatable member or dial on each side of the cube. Figure 2 shows three such dials 16, 18 and 20. The internal structure of the block and dials is best appreciated from the sectional view of Figure 3. The sectional view shows dials 16 and 18 of Figure 2 as well as two other dials 22 and 24 hidden in Figure 2.

Each dial has a circular outer face 26 bearing indicia in the form of a printed letter as may be observed for dial 16 of Figure 2. This form of the invention is preferred to that of Figure 1 for ease of reading the words formed. The dial has an inwardly tapering portion 28 which fits within a corresponding tapered aperture 30 in the cube. The inner end of each dial has an annular projection 32 received within a complementary annular groove 34 in the cube. The projection is pressed within the recess by a snapping action which keeps the dial in place and, at the same time, permits the dial to normally rotate. The dial may thus be rotated to any desired position for proper viewing of the letter on its particular side of a cube.

As may be observed in Figures 1 and 4, these cubes are provided with a square aperture 36 on each side for receiving a peg 38. The pegs are similarly square in transverse section and are sized so they are closely received in the apertures. The pegs are in the shape of rods and are used to connect the cubes together to form words as shown in Figure 1 and to connect the cubes to the board as shown by way of example in the third cube from the right in the bottom horizontal row of Figure 1. The fit is tight enough to hold the cubes together, but allows the pegs to be removed when desired to rearrange the cubes. It should be noted that this arrangement of a square aperture on each side of the cubes as well as providing a plurality of pegs 38 with the game apparatus allows the cubes to be assembled with any two sides of a given pair of cubes facing each other. At the same time, because the pegs and apertures are non-circular in transverse section, the cubes do not tend to rotate about the pegs. This is particularly important when creating cantilevered structures as shown in Figure 1. Considerable stability is added to the structure when compared with the possible use of round rods and apertures.

As may be seen in Figure 1, pegs 38 have a length such that adjacent sides of cubes are in contact when the pegs have one end completely received in an aperture of one cube and the opposite end received completely in an aperture of an adjacent cube.

The cube shown in Figures 2 and 3 similarly is provided with square apertures 40 in each dial and aligned square apertures 42 located in the inner part of the cube. The apertures are located at the center of each side of the cube and are also of a size just slightly larger than the square section of pegs 38 for a close fit. It should be noted that the bottoms of the letters shown in Figure 2 on each of the dials must face one of the edges of the side in order to align the apertures 40 in the dials with the apertures 42 in the blocks. When the block is being used, the dial is adjusted to the desired position before inserting the peg. Once the square peg extends through the dial to the cube rotation can no longer occur. Thus the same result is achieved as for the embodiment of Figures 1 and 4.

Figure 1 shows a plurality of apertures 44 spaced-apart in a grid arrangement on the board 10. These serve to receive the pegs of cubes mounted on top of the board, for example peg 38 of cube 2.2. In addition, these apertures serve to receive longer supports provided for the cantilevered portions of the cube arrangement. Three such supports 46, 48 and 50 are shown in Figure 1. The supports are the same in section as the pegs so that they fit within the apertures of the cubes and the apertures in the board. Each of the supports comprises a rod with a length equal to the length of one side of each cube or a multiple of said lengths excluding the portion of the rod receiveable in the apertures of the cubes and the apetures of the board. For example, supports 46 and 48 have a length equal to that of five cubes, while support 50 has the length of three cubes. As mentioned, this excludes the portions of the supports which are fitted within the cube above and the board below.

In a preferred form of the invention, the indicia representing the letters on each side of the cube are provided in a variety of colors with different colors for different sides of each cube. In the preferred embodiment, four such colors, namely green, blue, red and black are provided. The cube 2.1 shown in Figure 4 has the letters B colored green, the letters Z and K colored red, the letters T and A colored black, and the letters E colored blue.

RULES

The game may be played by two or more players who begin by each choosing one cube from a bag containing all cubes. In the preferred embodiment a total of 95 cubes are used. Each player then rolls the chosen cube like a die. The player with the letter closest to the letter A plays first.

Each player then chooses six more cubes from the bag making a total of seven cubes for each player.

The first player combines two or more cubes to form a word and attaches the cubes to the board with the pegs. The words are always read from left to right or, from top to bottom vertically in a column, or from from back to front on the board surface. Referring to Figure 5, words on the top horizontal surface of the cubes, such as the word "REGULAR" are read from left to right while facing the front 52 of the board. However, horizontal words facing the back 54 of the board, such as the word "FERTILE" are read from left to right while facing the back of the board. Diagonal words are not permitted.

Each player is scored at the end of his turn according to the rules set forth under the heading "SCORING" below. Each player draws new cubes at the end of his move to keep a constant number of seven.

Each player in turn then adds new cubes with at least one side being joined to the existing cube structure to form a new word or words. At least one letter of the word must comprise an existing letter on the board.

The game ends after one player has used all cubes and after all players have had an equal number of turns. High score wins.

Any words that need not be capitalized and that do not require an apostrophe or a hyphen may be used. Abbreviations are not permitted. Cubes may not be turned once they have been pegged and scored.

Words facing downwards are not scored.

Columns must not be more than 12 cubes high.

SCORING

When a player adds a number of cubes to the existing structure of cubes which forms a new word only on one side of the new row or column of cubes, the score is determined by adding the value of the letters adjacent each letter on each side of the cube as may be noted in the drawings. If the word on this one side of the block is comprised of letters all of a single color, the value of the word is doubled.

If the player adds new cubes forming new words along two sides of the column or row of new cubes the letter values are added and doubled if the colors are mixed. If the word on one side is entirely of one color, the value of this word is first calculated and doubled. The doubled value of the first word is then added to the value of the second word and the sum is again doubled for the total score. If the words on one side are of a single color and in addition the words on a second side of the row or column of cubes are of a single color, the score is determined by adding the value of the letters and multiplying the sum by four.

If a player adds cubes forming words on three sides of the row or column, the letter values are totaled and the score is triple its value if the words are of mixed colors. If one side is of a single color, the value of this word is first doubled before being added to the value of the other two words. The total is again tripled. If two sides are of a single color, the letter values of these two sides are first added and doubled. The total is then added to the value of the third word and the total is multiplied by three for the total score. If the player arranges words on three sides and each of the words is of a single color, the total letter value is mulitplied by six for the score.

It should be noted that words on four sides can only be obtained in a vertical column since words facing downwardly are not counted. If all words are of mixed colors, the total letter value is multiplied by four. If one side has letters of a single color, the value of this word is first doubled before being added to the value of the other letters. The total is again mulitplied by four. If two words are of a single color, the letter value of these two words is added and doubled and then added to the letter values of the other two words. The value is again multiplied by four. If the player arranges three words each having letters of a single color, the letter values of the three single colored words are added and doubled and then added to the letter values of the fourth word. The total is again multiplied by four for the score. Finally, if the player manages to achieve four words each having letters of a single color, the letter value is added and multiplied by eight for the total score of the play.

It should be noted that the player may add a letter which splits an existing word into two separate words. For example, referring to the top of the bottom horizontal row of cubes in Figure 1, the two words FIR and MAN are shown on each side of the column. The hidden letter between the R and the M is the letter E. Thus the original word was FIREMAN. In the next play, the player added a vertical column spelling the word LEARNED and at the same time covered the E to split the word FIREMAN into the words FIR and MAN. Thus the player calculates his score by totalling the values of the words FIR and MAN and LEARNED. If any of these three words comprises letters of a single color, the value of that word is first doubled before being added to the total score.

Figure 6 illustrates two horizontal rows of cubes intersecting to form a T-shaped structure. A special situation arises if it is assumed that the word EVOLVE was first in place and a player added the remaining cubes for his move. In this case, the player obtains credit for four words, namely CRUDITY, FIR, MAN and DEVOLVE. Again, if any of these words comprises letters of a single color, the value of this will be doubled before being added to the total score.

WHAT IS CLAIMED IS:

1. An apparatus (1) for playing a word game, comprising:

   (a) a plurality of cubes (2,14) having indicia representing letters on each side thereof;

   (b) an aperture (36,40,42) at the centre of each side of each cube;and

   (c) a plurality of peg means (38) removably receivable in each aperture for connecting the cubes together to form words with the letters along adjacent sides of the cubes.

2. An apparatus as claimed in Claim 1, wherein each of the peg means (38) has a length such that adjacent sides of two adjacent cubes are in contact when a first end of said each peg means is completely received in said aperture (36,40,42) of one said adjacent cube and a second end of said each peg means is completely received in said aperture of another said adjacent cube.

3. An apparatus as claimed in Claim 2, wherein the peg means (38) and the apertures (36,40,42) are non-circular in transverse section to prevent rotation of the cubes about the rods.

4. An apparatus as claimed in Claim 3, wherein the peg means (38)and the apertures (36,40,42) are square in transverse section.

5. An apparatus as claimed in Claim 4, further comprising a game board with a plurality of apertures spaced-apart in a grid arrangement to receive the peg means of adjacent cubes on the board.

6. An apparatus as claimed in Claim 5, further comprising support

means for extending between the apertures of the board and cubes spaced above the board to support the cubes above the board, the support means comprising a plurality of support rods each having two ends closely receivable in the apertures of the cubes and the apertures of the board, each of the rods having a length equal to the length of one side of each cube or a multiple of said length of one side of each cube, excluding portions of the rods receivable in the apertures of the cubes and the board.

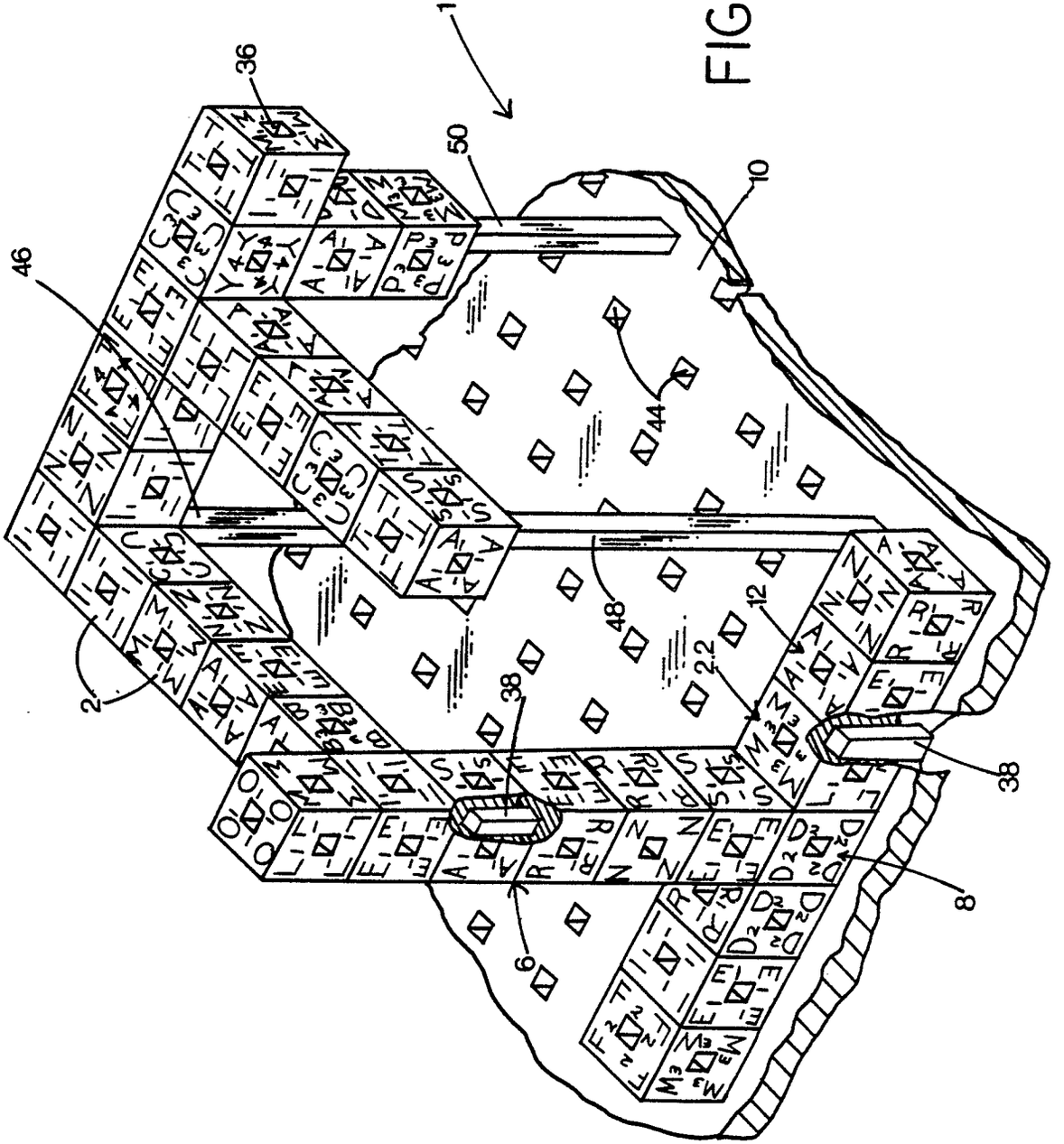
7. An apparatus as claimed in Claim 1, further comprising means on each side of each cube for providing at least one upright letter on each vertical side of the cube.

8. An apparatus as claimed in Claim 7, wherein said means on each side of each cube comprises a plurality of indicia on each side of the cube, each of the said indicia on said each side of the cube representing the same letter in different orientations.

9. An apparatus as claimed in Claim 7, wherein said means on each side of each cube comprises a rotatable member on each side of each said cube, the indicia of said each side being on the member.

10. An apparatus as claimed in Claim 9, wherein the apertures at the centre of each side comprises a central aperture on each member (16,18,20) for receiving one of the peg means (38) and permitting the one peg means to pass through the member into the cube(2,4), the peg means and the apertures in the members and the cubes being non-circular in section to prevent rotation of the members after the peg means are inserted into the cubes through the members.

FIG. 1



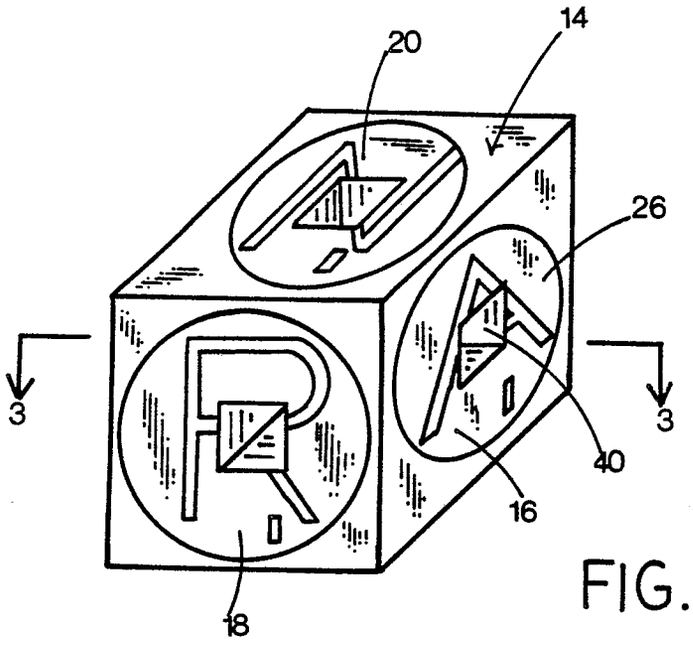


FIG. 2

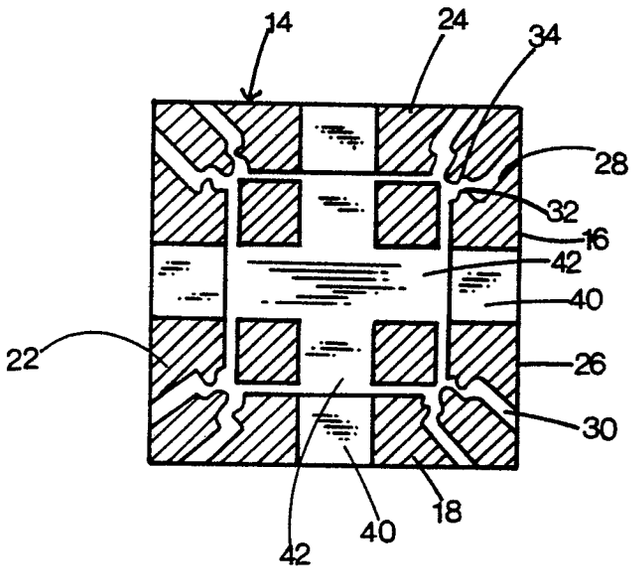


FIG. 3

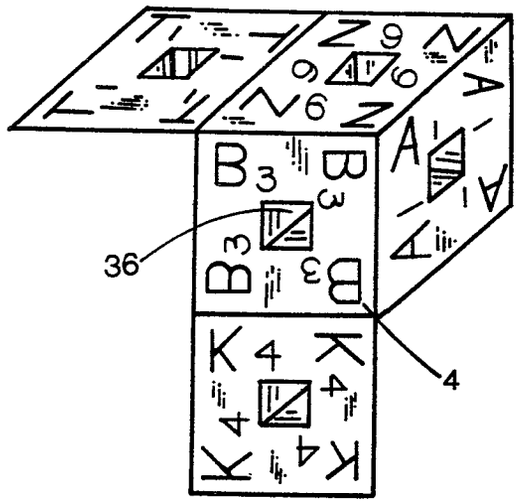


FIG. 4

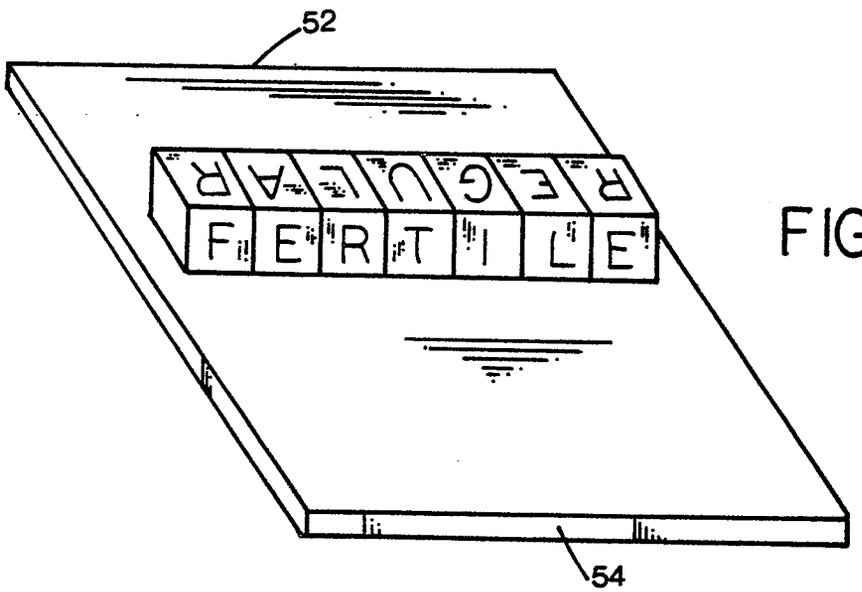


FIG. 5

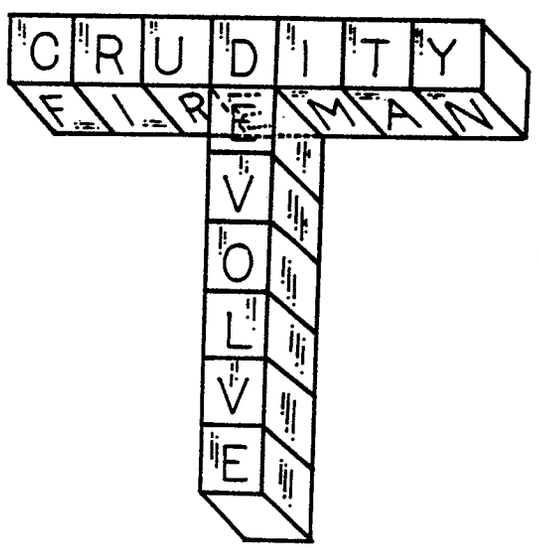


FIG. 6