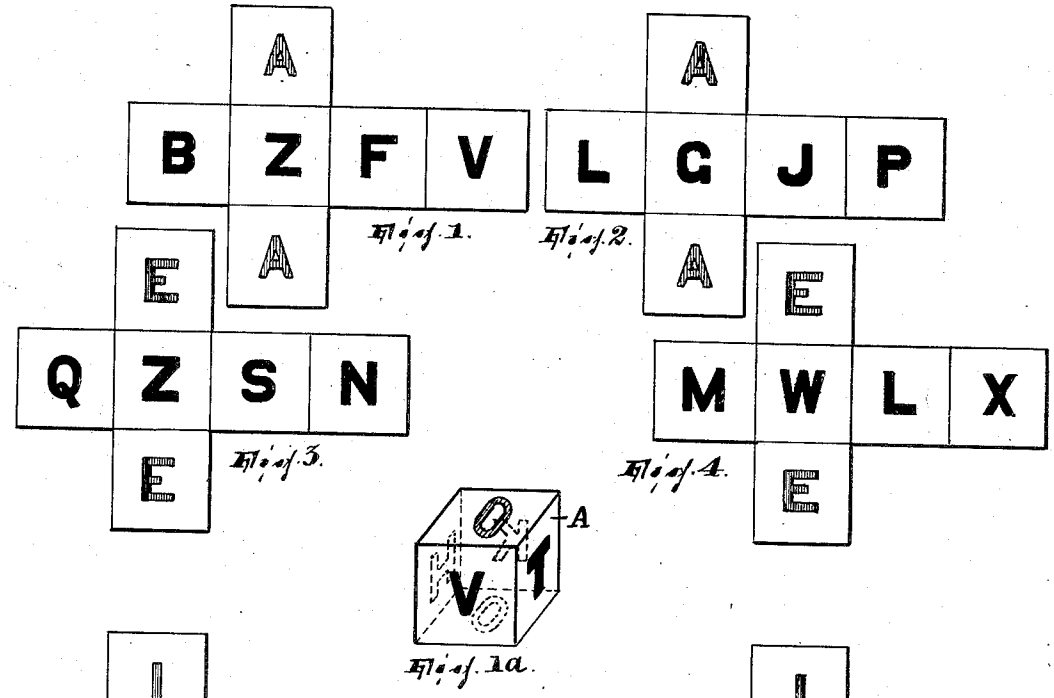
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L. J. ALLEN

GAME APPARATUS

Filed March 18, 1924




WITNESS

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# UNITED STATES PATENT OFFICE.

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## GAME APPARATUS.

Application filed March 18, 1924. Serial No. 700,047.

*To all whom it may concern:*

Be it known that I, LAURENCE J. ALLEN, a citizen of the United States, residing at Paterson, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Game Apparatus, of which the following is a specification.

This invention relates to game apparatus and particularly to game apparatus having an educational influence, the principal object being to provide a set of dice or cubical blocks with letters of the English alphabet which will afford interest and amusement to the players and enlarge their vocabulary in composing words therefrom and which will make it possible at each "throw" of the dice to compose a large number of words without the employment of an undue number of dice or blocks.

The drawing shows, in

Fig. 1[a] one of the cubical blocks or dice; and in

Figs. 1 to 10 developed views of the surfaces of the ten dice comprising the set.

In devising a set of dice having the letters of the English alphabet on the six faces thereof so that by throwing the dice the top letters may be used in composing words, I have found that in order to make it possible to include a considerable part of the vocabulary account must be taken of the very frequent repetition of a letter in the same word, as motor or commune; any game played with the dice would lack both interest and instructive influence if the dice only presented each letter of the alphabet once.

Again, it is very desirable that all the faces of the dice required should be occupied by letters, so that no throw of the dice will carry possibilities as to the number of letters available, or up, not being equal to that of any other throw.

My invention has been devised with these two main considerations in view, and I have therefore utilized the letters in such a way as to comply with them. In explanation of my invention,

Let it first be assumed that all the consonants, twenty in number (*y* being treated herein as a vowel), are duplicated; if these forty consonants were placed respectively on the faces of cubical blocks, as A, there would be required seven dice to receive them, with forty of the forty-two faces occupied and two vacant.

Let it next be assumed that each of the four vowels most commonly used, *a e i o*, is duplicated; these (additional) letters could be utilized to fill the said two vacant faces and the six faces of an eighth dice. But this would omit any provision for *u* and *y*; and it would furthermore leave the vowels in such a minority of the whole complement of letters on the dice with reference to the actual frequency with which vowels appear in the language in comparison with consonants that on many throws too few if any vowels would appear as top letters of the dice. I therefore quadruple each of the vowels, giving sixteen in all, which (40 consonants and 16 vowels) brings up the total number of letters to fifty six, requiring then two more dice, or ten in all, with fifty-six of the faces thereof filled and four still vacant.

I place, then, on these four faces *u* and *y*, each duplicated. So that all the sixty faces of the ten dice are now filled.

The duplicated consonants are placed on different dice, for example, one *m* on one dice and the other on another. This permits a throw to involve at least the possibility of the same consonant being twice presented or "up" for the forming of a word having any consonant twice, as connote. The quadrupled vowels (*a e i o*) are utilized in pairs, each pair being placed on one dice and the other pair on another, and in each instance the vowels of any pair are on opposite faces of the particular dice. Thus each vowel is possible of appearing, or "coming up", twice on any throw (so that the double appearance of any vowel as well as any consonant in a word is provided for), without the same vowel being allowed to appear three or four times in a throw, comparatively few words having the same vowel appearing more than twice; each vowel as to any one dice has two chances in six of coming up, whereas each consonant on any one dice has only one, and this disparity causes the "coming up" of the vowels and consonants to occur in about the same relative frequency as vowels and consonants appear in the language. The vowels *u* and *y*, two of each, are all four placed on different dice, so as to allow for a repetition of either of these letters in a word.

The prescribed arrangement of the letters on the dice is shown by Figs. 1 to 8.

In playing the game with the dice any rules of procedure may be adopted. For instance, it may be simply a matter of the dice being thrown, as by the players in turn, and the players on each throw competing with each other as to the greatest number of words which each can compose in a given time from the letters which come up. The apparatus is therefore not only a source of amusement but is of great value in increasing the vocabulary of the players, and also their information generally, especially if they be allowed in verifying the correctness of any word formed to refer to the dictionary therefor and for its definition.

My invention is not to be understood as limited to all the details hereinbefore set forth for the purpose of explaining one example of the underlying concept, which I claim as follows:

A game apparatus including a set of ten substantially cubical blocks on forty of the faces of which respectively appear the twenty consonants of the alphabet each duplicated, each two similar consonants being on different dice, and on eight pairs of opposed faces of which set appear the vowels *a e i o*, each such vowel on two pairs of such opposed faces, and on the remaining four faces of which set appear the vowels *u* and *y*.

In testimony whereof I affix my signature.

LAURENCE J. ALLEN.