Feb. 7, 1967 D. M. ISRAEL 3,302,311

EDUCATIONAL GAME

Filed May 20, 1964 2 Sheets-Sheet 1

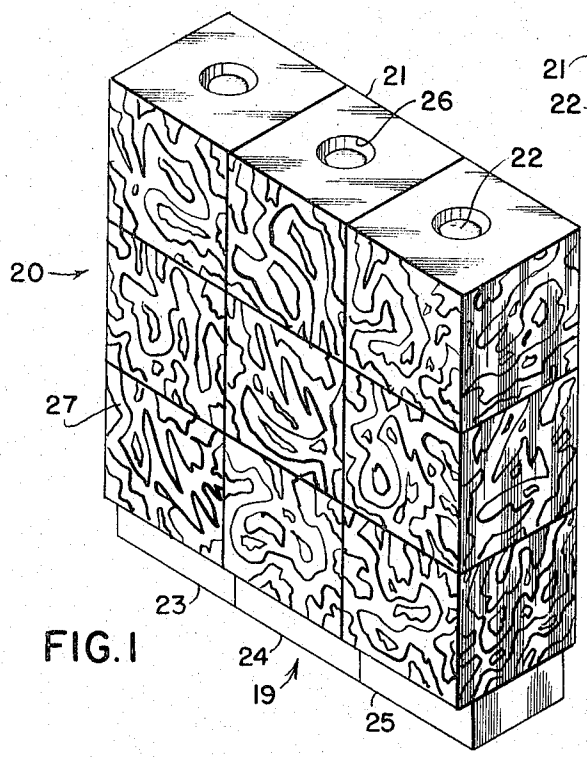


FIG. 1

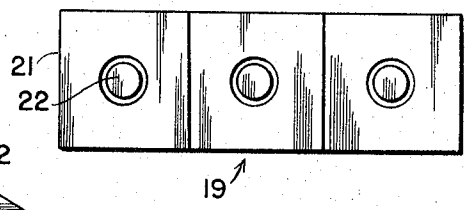
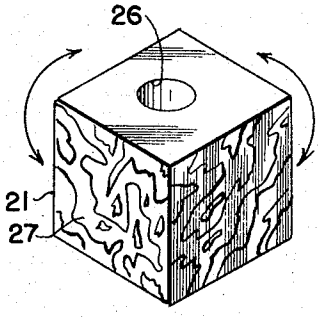


FIG. 2

FIG. 3



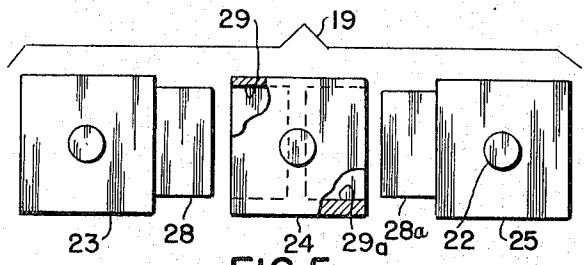


FIG. 5

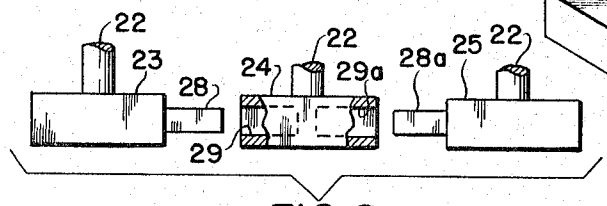


FIG. 6

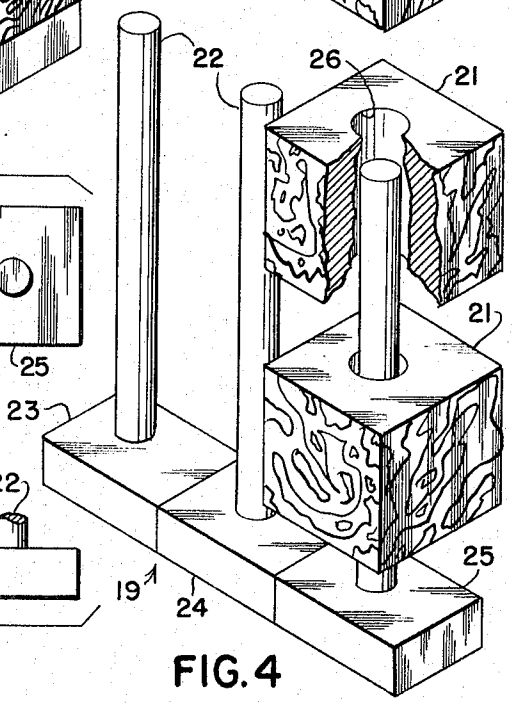


FIG. 4

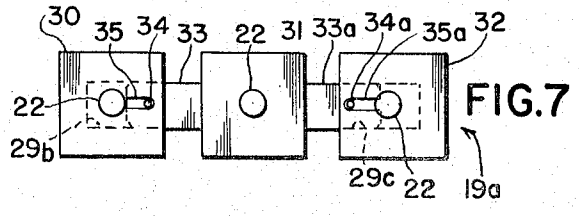


FIG. 7

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FIG.8

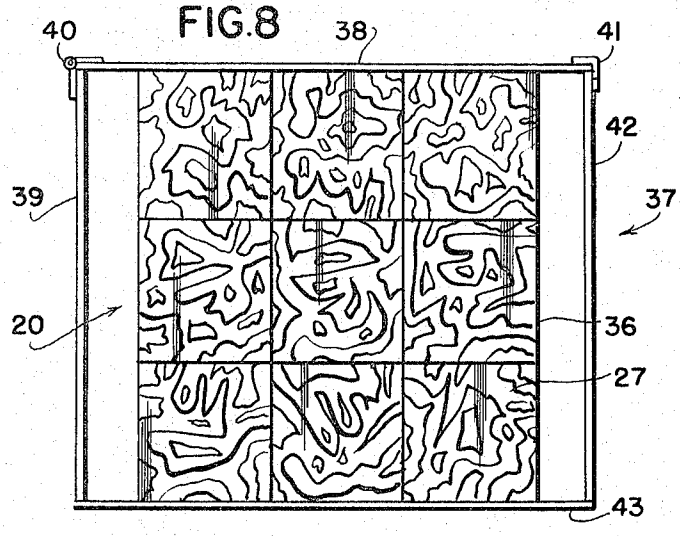


FIG.9

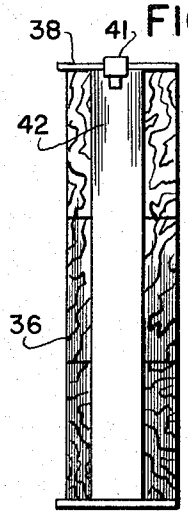
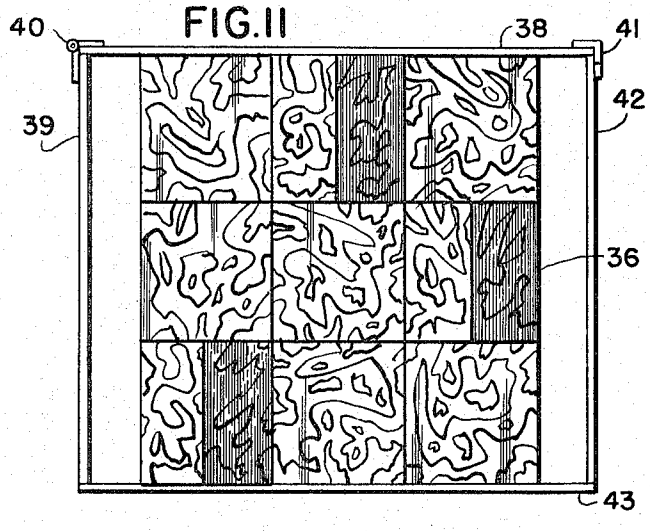


FIG.11



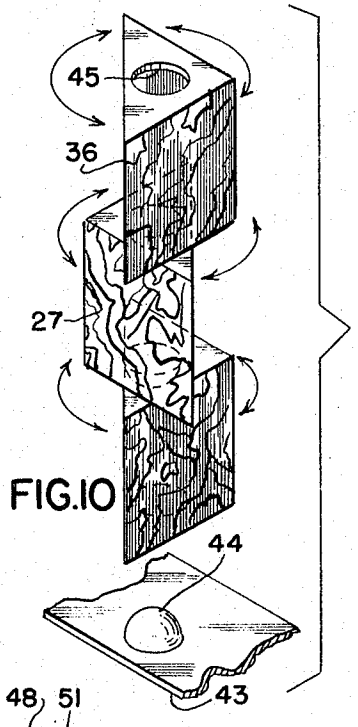


FIG.10

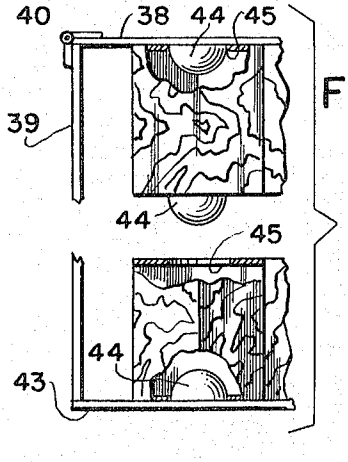


FIG.12

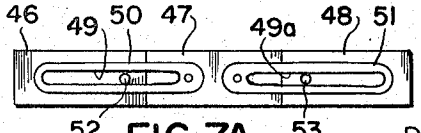


FIG.7A

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United States Patent Office

3,302,311

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3,302,311

EDUCATIONAL GAME

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Filed May 20, 1964, Ser. No. 368,905
6 Claims. (Cl. 35—69)

This invention relates to educational and therapeutic games, and its principal object is to provide a device of this kind having a multiplicity of continuously arranged blocks carrying artistic indicia on each face thereof which may be arranged and rearranged to produce various patterns, designs or configurations which may be discontinuous or continuous to bring into view a prearranged assembly or assemblies defining an object or objects.

A further object of the present invention is to provide a stand for said blocks to enable the blocks to be individually manipulated to carry out the aforementioned object.

Another object of the present invention is to provide the device with a frame and means for mounting or supporting the blocks in the frame in such a manner that they may be individually manipulated.

A still further object of the present invention is to mount the blocks in a holder in such manner that faces of contiguous blocks may be aligned respectively.

Yet another object of the present invention is to provide a frame structure for the block assembly whereby individual blocks may be rotated to present selective respective faces of the blocks.

These and other objects, features and advantages will clearly appear from the detailed description given below taken in connection with the accompanying drawings which form part of this specification and illustrate merely by way of example certain embodiments of the device of the invention. In the following description and in the claims, parts will be identified by specific names for convenience, but such names are intended to be as generic in their application to similar parts as the art will permit. Like reference characters denote like parts in the figures of the drawings, in which:

FIG. 1 shows, in perspective, a structural arrangement of blocks carrying artistic indicia, according to the invention;

FIG. 2 is a plan view of the arrangement shown in FIG. 1;

FIG. 3 is a perspective view of a cubical block of the arrangement shown in FIG. 1;

FIG. 4 is an exploded view, in perspective, showing the structure of the arrangement shown in FIG. 1;

FIG. 5 is a plan view of the bottom structure of the arrangement shown in FIGS. 1 and 4;

FIG. 6 is a side view of the bottom structure shown in FIG. 5;

FIGS. 7, 7*a* are modified embodiments of the bottom structure shown in FIG. 5;

FIG. 8 is another form of structural arrangement, according to the invention;

FIG. 9 is a side view of the arrangement shown in FIG. 8;

FIG. 10 shows, in perspective, three of the triangularly-shaped blocks, utilizable in the arrangement shown in FIG. 8;

FIG. 11 shows the arrangement shown in FIG. 8, with several of the triangularly-shaped blocks in selected rotational positions; and

FIG. 12 shows two of the triangularly-shaped blocks, partly broken away, illustrating a detail of assembly.

Referring now in more detail to the drawings illustrating preferred embodiments by which the invention may be realized, there is disclosed in FIG. 1 an arrangement

20 of nine cubes or blocks, which are lined up and rotatably held on three vertical shafts **22**. The shafts **22** are attached to a holder or base **19**, which, in the embodiment seen in FIGS. 1 to 6, comprises bottom pieces or members **23, 24, 25** which are arranged and assembled in such manner that the distances of the vertical shafts **22** from one to the other are substantially equal to the dimension of a side of the blocks or cubes **21**. The cubes **21** have a central through hole **26** so that they fit loosely over shafts **22**. Cubes **21** carry on the four sides, which are parallel to the central hole **26**, artistic indicia, either in black and white, or in colors, forming patterns, color schemes or irregular configurations, as indicated by the numeral **27**. The bottom members or pieces **23, 24, 25** are held together by a tongue-and-groove or slot arrangement, in such manner that bottom pieces **23** and **25** have protruding tongues **28, 28***a* which fit slidingly in corresponding cavities or slots **29, 29***a* of bottom piece **24**.

FIG. 7 discloses a holder or base **19***a* in which a more permanent arrangement of the members or pieces is shown, and wherein members or pieces **30** and **32** have cavities or slots **29***b*, **29***c*, whereas member or piece **31** has two tongues **33, 33***a*. However, the tongues **33** have pegs or pins **34, 34***a* which slidingly fit in elongated grooves or slots **35, 35***a* in the members or pieces **30** and **32**, so that the two outside members or pieces **30** and **32** may be pulled outwardly from the center member or piece **31** to a degree limited by the stops or pegs **34, 34***a*. This extension or sliding movement of members **30, 32** with relation to center member **31** permits rotation of the cubes or blocks **21** on their corresponding shafts **22**. When a desired configuration or design is obtained, the members **30, 32** are returned to normal positions. This, of course, is applicable to FIG. 5, the difference being that no stops or pegs are provided to limit the outward movement of members or pieces **23, 25**. According to this construction, the blocks or cubes **21** may be withdrawn from the respective shafts **22** and rearranged or they may be rotated or may be rearranged and rotated, presenting a myriad of sectional designs or faces. Each face may form a section of a predetermined configuration or total design.

According to FIG. 7*a*, the members **46, 47** and **48** are extendably tied together by the links **50, 51**, and the pins **52, 53**, guided respectively in the slots **49, 49***a*. Links **50, 51** are secured to the intermediate member **47**.

Another embodiment of the present invention is shown in FIGS. 8 to 12. As an example, there are shown nine blocks **36**, each triangularly-shaped in section and having rectangular faces, arranged in a holder or frame **37**, consisting of four, preferably flat sides or members, in such manner that a rectangular disposition **20** of the blocks **36** is achieved. The upper member **38** of frame **37** may be connected with the side wall **39** by a hinge **40** or the like, and a latch device **41** may be employed for holding it in closed position on the side wall **42**. The hinge **40** and latch device **41** are of conventional types and, therefore, will not be described in detail. On each one of the inner sides of the upper member **38** and of the bottom member **43** are three semi-spherical probosces **44** which engage in corresponding circular recesses or sockets **45** in the triangular blocks **36** so that the latter may be rotated about these pivotal means independently from one another. The blocks of the upper and of the center rows have simliar recesses **45** on one face thereof, and have semi-spherical probosces **44** on the opposite face thereof, whereas the blocks of the lower row have recesses in both faces thereof.

The rectangular or square faces of the triangularly-shaped blocks **36** again have artistic indicia **27** painted or

printed thereon, in the same manner as described above. The blocks **36** may be made of solid material, or may be hollow, made of cardboard, plastic or the like. The frame **37** may be made of any suitable material. The designs or configurations may be printed on paper or the like and the latter then secured to the faces of the blocks. It is understood that in lieu of the semi-spherical member-and-socket arrangement, the blocks **36** may be provided with through holes and frame with shafts similar to the construction shown in FIGS. 1 to 7.

The operation of this educational or psychotherapeutical device is such that practically innumerable variations of patterns and schemes can be made by shuffling and reshuffling the blocks around, up and down and/or by rotating them at will, or, according to a prearranged design or configuration, creating varying overall appearances of the total picture constituting, in the examples shown, nine faces arranged in a square. It is obvious that the arrangement **20** also can be made up of any other number of blocks, for example, of 4, 16, 25, 36, etc.

It is further obvious that although the amount of blocks used in the examples herein are such that an overall square face is produced, made up of the individual square faces, other amounts of blocks may be used to provide overall rectangular faces other than square. It has however been found that nine blocks form a preferred assembly. It is also possible, due to the square configuration of the faces, to turn the frame **37** on a side, around or upside-down, thus presenting other combinations of configurations to the player.

While the invention has been described and illustrated with respect to certain preferred examples which give satisfactory results, it will be understood by those skilled in the art after understanding the principle of the invention, that various other changes and modifications may be made without departing from the spirit and scope of the invention, and it is intended therefore in the appended claims to cover all such changes and modifications.

I claim:

1. An educational and therapeutic game comprising a plurality of blocks carrying artistic indicia on each face thereof, said faces being substantially square, said blocks having holes, a plurality of vertically arranged pins having substantially the same diameter as said holes in said blocks whereby said blocks may be individually rotated about said pins, and a base plate for holding said pins in spaced relationship whereby said blocks may be arranged in contiguous horizontal alignment, said base plate consisting of a plurality of parts, each one of said parts carrying one of said pins, and means for movably connecting said parts whereby said parts may be laterally spaced apart during said rotation of said blocks.

2. A game according to claim **1**, and comprising a frame surrounding said blocks.

3. A game according to claim **2**, and wherein said frame has a swingable hinged upper member.

4. A game according to claim **3**, and wherein each of said blocks is triangular in section, each of said blocks having three square faces.

5. A game according to claim **1**, and wherein said means comprises tongue and groove members.

6. A game according to claim **1**, and wherein said means comprises pin and link members.

References Cited by the Examiner

UNITED STATES PATENTS

61,531	1/1867	Freetsha	35—27
523,676	7/1894	McGrath	35—35
1,453,728	5/1923	Rhodes	35—27
1,636,371	7/1927	Kenney	35—27
1,995,154	3/1935	Morrison	35—77
2,429,027	10/1947	Myers	35—35
2,899,757	8/1959	Webb	35—32
2,981,009	4/1961	Lindquist	35—17

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