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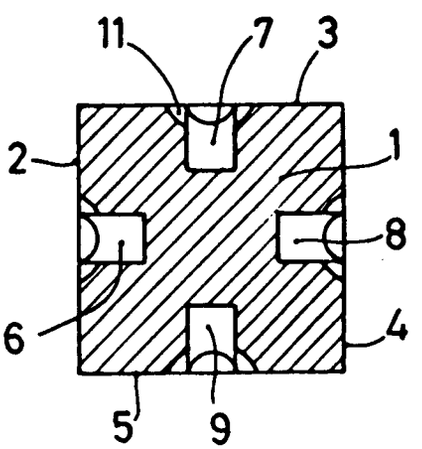
(54) **A game consisting of the building of geometric bodies from elemental cubes.**

(57) Characterized in that it comprises a mutiplicity of elemental cubic components provided with orifices in each of their sides in an identical position relative to the respective face and having the same cross-section and depth and being capable of receiving a connection dowel on application of a slight pressure so as to enable the attachment of each elemental cube to others adjacent thereto resulting in the building of the final desired geometric body.

FIG.1



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This invention patent discloses a game which consists of elemental cubes which can be built into geometric bodies including the formation of larger cubes or more complex geometric bodies and particularly having a parallelopiped shape or some combination of parallelopiped shapes.

The game which is the object of this present patent may be for amusement or for increasing the skill of the user in that it offers a considerable variety of combinations of the cube elements mutually joined together to make up a stable geometric figure.

Essentially, the game which is the object of this patent comprises the combining of a multiplicity of elemental cubes having on their lateral sides orifices for their attachment and removable dowels which provide the means of the said mutual attachment, thus offering the possibilty for varying the position of the attachment from one face to another of the cubes such that successive attachments of cube to cube will result in building the required larger figure.

An obvious attraction of the game, object of this patent is the ability to couple the elemental cubes with considerable flexibility without the restriction of any specific rules.

The elemental cubic components which are the basis of this building game are provided preferentially with orifices in each of the sides, particularly these being blind holes central to the face although this disposition is not an indispensable characteristic of the game. For preference the holes will be in the form of rectilinear prisms with a conical lead-in or chamfer to facilitate the entry of the dowels.

However it is readily appreciated that since the holes in the elemental cubes are provided solely for attachment of the said cubes by means of the connecting dowels their transverse section may be of any form, cylindrical or other on condition that they fulfil the condition of rectangular perpendicularity of generatrices with respect to the plane of the faces of the cube so as to allow the insertion of the connecting dowels.

To facilitate the explanation of this invention attached hereto are drawings of a prefered embodiment of the game for building geometric bodies as disclosed in this patent.

Figure 1 shows a full section of one of the elemental cubes which comprise the game on planes of symmetry.

Figure 2 is a plan elevation of the cube shown in Figure 1.

Figure 3 shows a plan view of one of the dowels for connection the cubes.

Figure 4 is a section view of a central cube attached to one other cube on each of two opposite sides by means of the connection dowels.

Figure 5 is a section view showing one of the elemental cubes in its position for attachment to another with its connection dowel prior to assembly.

Figure 6 is a plan view showing the relative position of one elemental cube with respect to four other adjacent cubes, one of which is in its precoupled state all as disclosed in this invention.

Figure 7 is a perspective view of one of the elemental cube components of this game showing the relative disposition of the connecting dowel.

Figure 8 is a perspective view showing the disposition of three cubes to be coupled by means of the corresponding connecting dowels.

Figure 9 shows the position of one of the cubic elements as part of a larger geometric shape which in the case illustrated is a larger cube.

Figure 10 shows a final larger geometric body comprising elemental cubes some of which are aligned prior to attachment to the main body which is required to be built in accordance with this invention.

As may be seen in the accompanying drawings the game which is the object of this patent consists essentially of elemental cubic components -1- having on each of its sides, as for example, -2-, -3-, -4-, and -5-, in figure 1, orifices respectively -6-, -7-, -8-, and -9- in which can be fitted connecting dowels -10-, as in figure 3 the transverse section of which is such that their insertion into the said orifices can be effected by means of a light pressure on the dowel in question.

The orifices -6-, -7-, -8-, and -9-, are blind and their length which is a variable is such it allows the dowel -10- to complete a satisfactory face to face contact of adjacent elemental cubes.

The orifices in the sides of the cubes should preferably be central to the face as may be seen in Figure 2 though this is not an indispensable characteristic for purposes of this invention.

The transverse section of the dowels for preference should be square although it may be appreciated that other forms may be suitable having generatrices a rectangular perpendicularity to the face to which they correspond.

It is obvious that the dimensions of the orifices in all the sides of all the elemental cubes must be identical so as to permit the easy attachment of any one cube to any other in any relative position of adjacent faces by means of the connecting dowels.

So as to facilitate the insertion of the dowels in the respective orifices in the cubes the edge of the hole where it meets the face should be chamfered or rounded as in -11- in Figure 2. For the same reason the ends of the dowels -10-, in Figure 3, are chamfered or radiused, -12- and -13-.

As may be seen in Figures 7 and 8 the elemental cube -19- can accept the insertion of of a

connecting dowel -20- from above as well as receiving dowels inserted in the other sides of the cube such as -21- and -22- in order to be attached to other elemental cubes such as -23- and -24-. It is clearly seen that the attachment of one cube to another adjacent requires a minimum of one dowel, each cube being centralized with respect to its adjacent element, however some of the interior pieces in the required geometric body should they be covered on all faces by other elemental cubes, may be independent and hence not attached by connecting dowels.

Figures 9 and 10 show a larger geometric body with Figure 9 being a cube and the elemental cube component -26- of the said larger dimensioned body -25- forming one of the vertices of the cube -25-.

Figure 10 shows a part assembly -27- of three elemental cubes in linear attachment and which form the total edge of the final body -25- or could form any other intermediate position in the final body assembly.

The characteristics of this invention will provide a wide range of possible configurations of geometric figures.

Anything not altering modifying or changing the essence of the herein disclosed game is a variable for purposes of this invention patent.

Claims

1. A game consisting of the building of geometric bodies from elemental cubes, characterized in the provision of a multiplicity of elemental cubic components having orifices in each side of the cubes, they being in an identical position relative to the face and of identical section and depth and being capable of receiving a connecting dowel which can be inserted using a light pressure, the said dowel being the means for attaching any one elemental cube to an adjacent cube and thus forming the desired final geometric shape

2. A game consisting of the building of geometric bodies from elemental cubes, as in claim 1, characterised in that the orifices in the sides of the elemental cubic components are situated in the geometric centre of the respective face of the cube.

3. A game consisting of the building of geometric bodies from elemental cubes, as in claim 1, characterized in that the orifices in the sides of the elemental cubeic components are of a regular geometric shape and have their generatrices perpendicular to the respective faces of the cube.

4. A game consisting of the building of geometric bodies from elemental cubes as in claim 3, characterized in that the orificesin each of the sides of the cubes is of square parallelopiped shape.

5. A game consisting of the building of geometric bodies from elemental cubes, as in claim 1, characterized in that the orifices in each of the sides of the cubes have a chamfered or similar elad-in on the entry edge coincident with the plane of the face so as to facilitatethe insertion of the corresponding dowel.

6. A game consisting of the building of geometric bodies from elemental cubes, as in claim 1, characterized in that the connection dowels have a cross section which is related to the orifices in the cubes such that they may be inserted into the said orifices using light pressure and having a small interference. The dowels are also finished with a radius or chamfer at each end to facilitate their insertion.

FIG.1

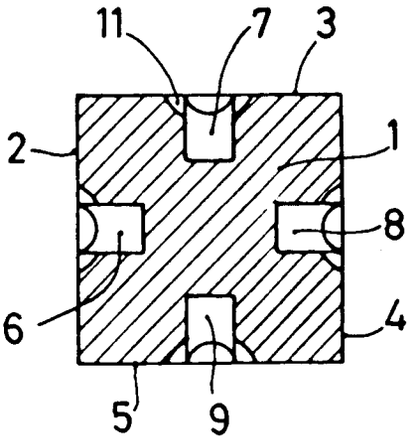

FIG.2

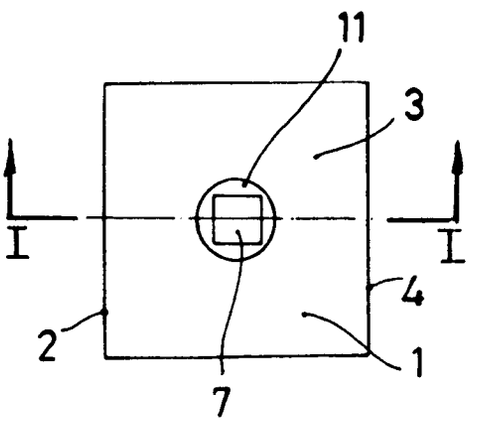

FIG.3

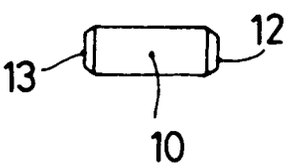

FIG. 4

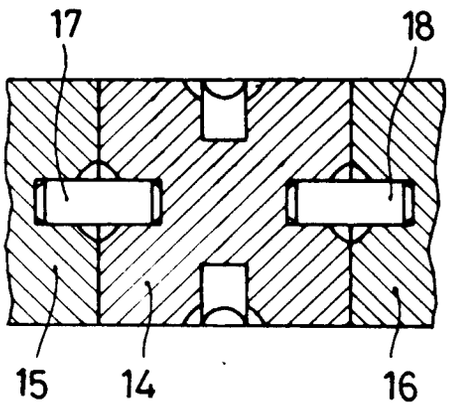

FIG. 5

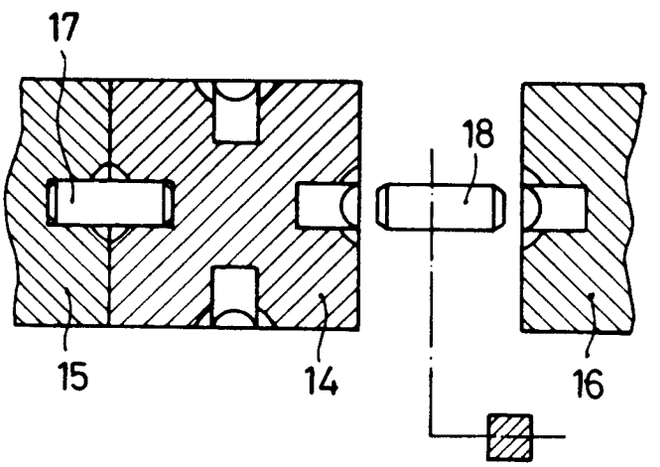

FIG. 6

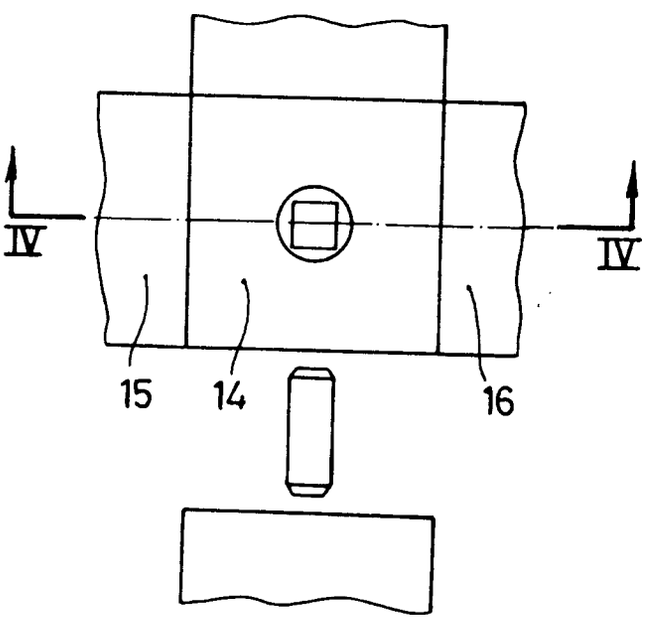

FIG. 7

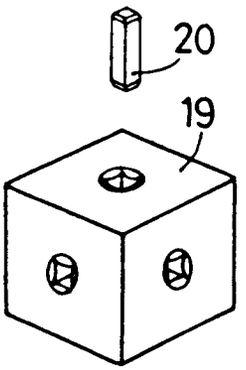

FIG. 8

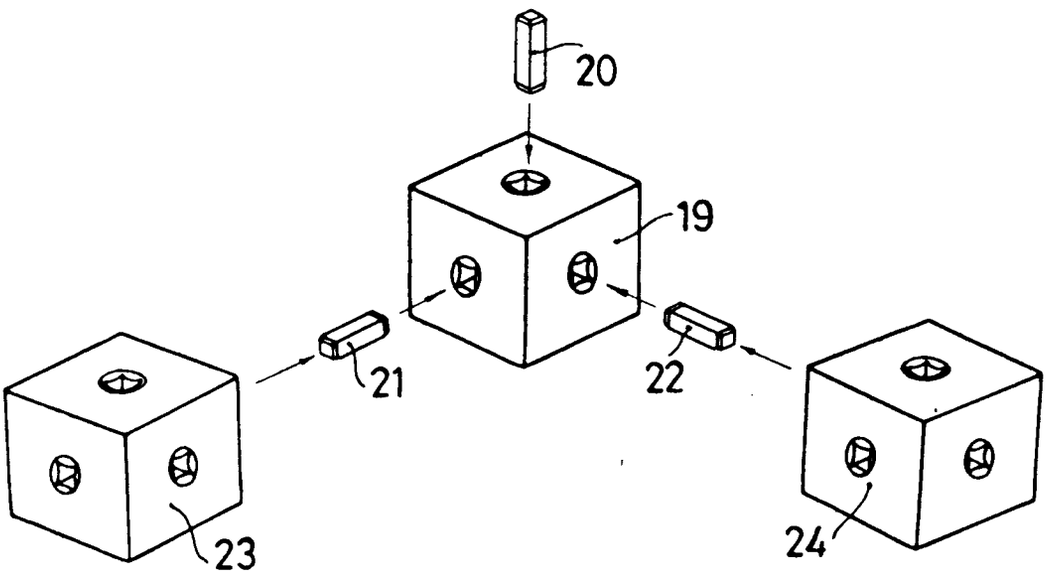

FIG. 9

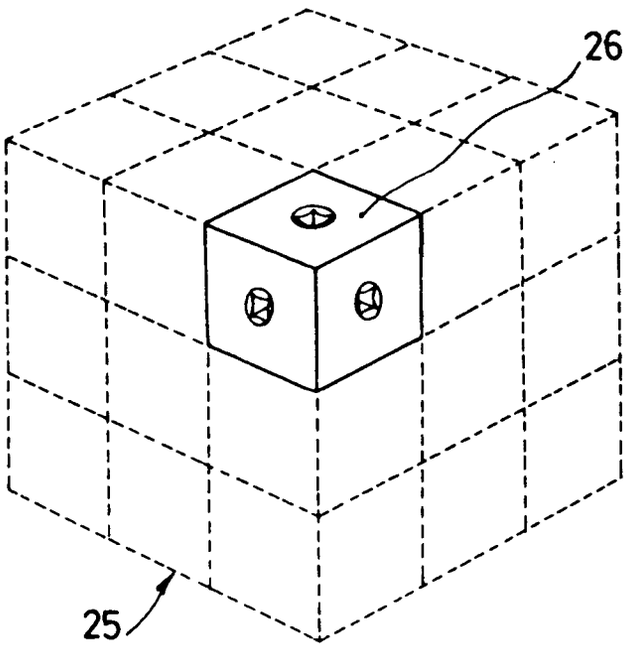

FIG. 10