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A6H HKA

(56) Documents Cited
GB 0675678 A US 5127652 A US 4741534 A
US 4307886 A

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INT CL^6 A63F 9/00 9/12

(54) Puzzle

(57) A puzzle (1) comprising a plurality of cubes (3, 5) having parts of different pictures on each of their six faces and holding means (9, 11) for holding the cubes in juxtaposition. The holding means may be magnets (9) and magnetisable material (11) respectively.

FIG. 1

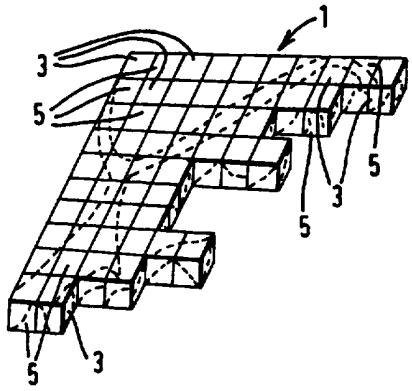


FIG. 2

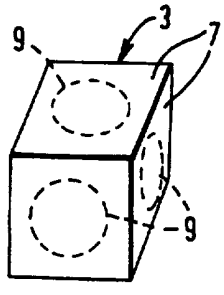
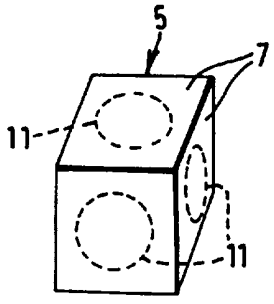


FIG. 3



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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995

FIG. 1

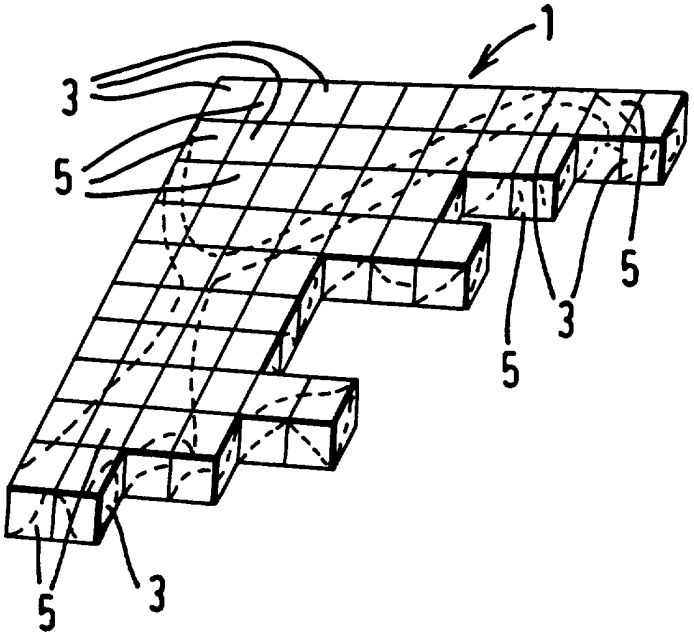


FIG. 2

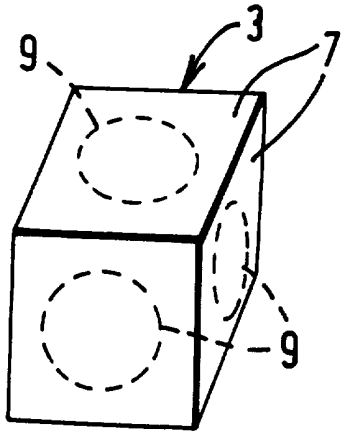
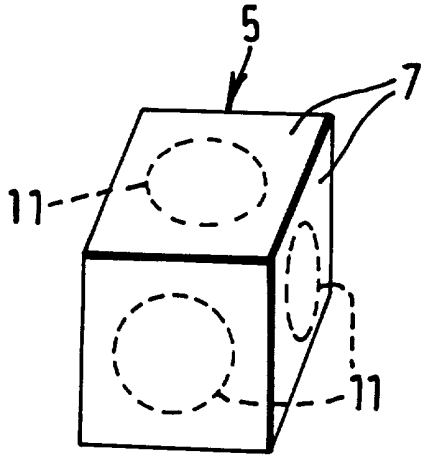


FIG. 3



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PUZZLE

This invention relates to puzzles and more particularly to puzzles known as jigsaw puzzles.

Most puzzles in this area contain a large number of flat pieces of various shapes which may be interlocking or non interlocking, which fit together to form a picture the various elements of which have been printed on the pieces.

In children's puzzles, a relatively small number of pieces are used, which may for example, be as little as twelve.

One variation of the children's puzzle is made out of square blocks or cubes. In one such arrangement, the puzzle is made up of twelve cubes in four lines of three. when the cubes are placed in the correct positions with the same sides facing upwards a completed picture appears. The same can be carried out with the other six sides of the cube so that a total of six pictures can be made.

The present invention seeks to improve this principle to make it applicable to adult puzzles. The problem which the present inventor has realised with this adaptation lies in the fact that, particularly with a large number of cubes, it is extremely difficult to keep the cubes in position while adding cubes thereto and that the movement of sections of blocks from one position to another is extremely difficult.

According to the invention, a puzzle comprises a plurality of cubes having parts of different pictures on each of their six faces and holding means for holding the cubes in juxtaposition.

Preferably the cubes are held together magnetically. To this end either all cubes have one or more magnets embedded in

them or half of the cubes have one or more magnets embedded in them while the other half have magnetically attractable material embedded therein such that adjacent cubes comprise a cube having one or more magnets embedded therein while the other cube has magnetically attractable material embedded therein.

Six magnet elements or six magnetically attractable elements may be provided for each cube, one for each face.

The invention will now be described in greater detail, by way of example, with reference to the drawings, in which:-

Figure 1 is a perspective view of part of a puzzle in accordance with the invention; and

Figure 2 is a perspective view, on an enlarged scale, of a first single piece from the puzzle of figure 1, and

Figure 3 is a perspective view on an enlarged scale, of a second single piece from the puzzle of figure 1.

Referring to the drawings, one embodiment of a puzzle in accordance with the invention is shown at 1. The puzzle comprises a number of six sided cubes 3 and 5, the cubes 3 having magnet elements embedded therein while the cubes 5 have magnetically attractable elements therein. One of the cubes 3 is shown in greater detail in figure 2 while one of the cubes 5 is shown in greater detail in figure 3.

It will be appreciated that, in the completed puzzle, apart from edge and corner cubes, all of the cubes 3 will be surrounded on four sides by cubes 5 while all the cubes 5 will be surrounded on four sides by cubes 3. In this way the puzzle will be held together.

The cubes may range in size from those suitable for a small children sized puzzle of, say twelve cubes to those suitable for a relatively complicated adult puzzle of a thousand or more cubes. Figure 1 shows a puzzle in which one corner has ben completed.

Figures 2 and 3 show a single cube 3 and a single cube 5 respectively in more detail. As will be appreciated, the cubes 3 and 5 have six sides 7, all of which are provided with picture elements so that each cube forms part of six pictures. In order to hold adjacent cubes together, each of the six faces of the cube 3 are provided with small magnets 9, which will attracted complementary magnetically attractable elements 11 provided in each side of an adjacent cube 5.

As each picture is built up, each cube will be held in position, except for edge cubes, by four adjacent cubes. Edge cubes will be held by three adjacent cubes while corner cubes will be held by two adjacent cubes.

In another embodiment of the invention (not shown), all the cubes may be the same with all cubes having six magnets embedded in them. In this embodiment, care must be taken to ensure suitable orientation of the magnets so that the cubes are held in proper alignment.

It will be appreciated that a number of modifications or additions may be made to the above described embodiments without departing from the scope of the invention. For example, with the use of small cubes, a single magnet of a suitable type may be used instead of the six otherwise provided and similarly a single magnetically attractable element may replace the six elements other wise provided.

In another possibility, the puzzle could be provided with a base sheet of a magnetically attractable material so that, not only would the cubes stick together, the cubes provided with magnets would also stick to the base.

CLAIMS

1. A puzzle comprising a plurality of cubes having parts of different pictures on each of their six faces and holding means for holding the cubes in juxtaposition.

2. A puzzle as claimed in claim 1, wherein the cubes are held together magnetically.

3. A puzzle as claimed in claim 2, wherein all the cubes have one or more magnets embedded in them.

4. A puzzle as claimed in claim 2, wherein half of the cubes have magnets embedded in them while the other half of the cubes have magnetically attractable material embedded therein such that adjacent cubes comprise a cube having one or more magnets embedded therein while the other cube has magnetically attractable material embedded therein.

5. A puzzle as claimed in any preceding claim, wherein six magnets or six magnetically attractable elements are provided for each cube, one for each face.

6. A puzzle substantially as described herein with reference to the drawings.

The Patent Office

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Application No: GB 9524936.3 **Examiner:** Alan Blunt
Claims searched: 1 to 6 **Date of search:** 25 February 1997

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): A6H (HKA)

Int Cl (Ed.6): A63F 9/00, 9/12

Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	GB675678	(PYLE) - page 4 lines 37 to 40	1
X	US5127652	(UNGER) - Figure 7 and column 6 lines 29 to 31	1 to 6
X	US4741534	(ROGAHN) - whole document	1, 2
X	US4307886	(KEMPER) - Figure 2	1 to 3

X Document indicating lack of novelty or inventive step
Y Document indicating lack of inventive step if combined with one or more other documents of same category.
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E Patent document published on or after, but with priority date earlier than, the filing date of this application.