

(12) **UK Patent Application** (19) **GB** (11) **2 312 852** (13) **A**

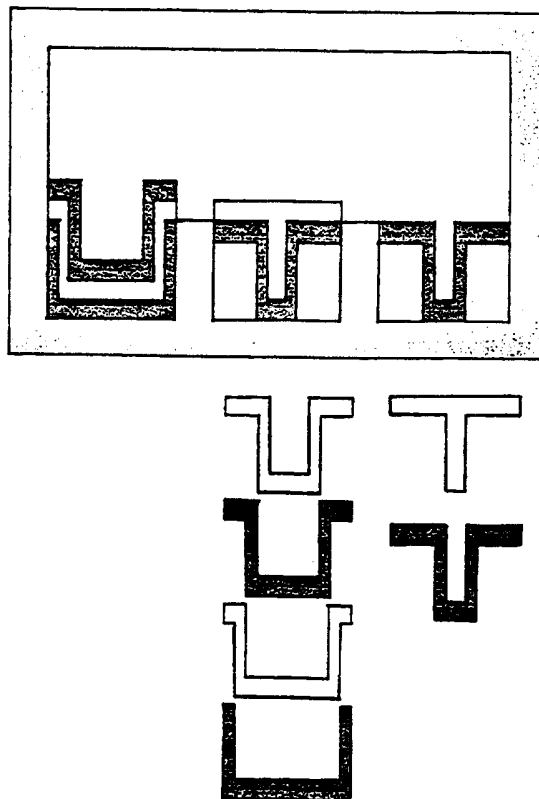
(43) Date of A Publication 12.11.1997

(21) Application No <b>9609255.6</b>	(51) INT CL <sup>6</sup> <b>A63F 9/08</b>
(22) Date of Filing <b>02.05.1996</b>	(52) UK CL (Edition O ) <b>A6H HKC</b>
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(72) Inventor(s) <b>Fletcher Searle Ditchburn</b>	(58) Field of Search UK CL (Edition O ) <b>A6H HKC</b> INT CL <sup>6</sup> <b>A63F 9/06 9/08</b>
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(54) **Puzzle**

(57) A puzzle comprises a box which contains three sub-compartments and a set of nesting playing pieces. The purpose of the puzzle is to transfer all the pieces by moving them one at a time from one sub-compartment to another. The puzzle is so constructed and arranged that it is physically impossible for a piece to undergo an incorrect move.

Figure 5



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

At least one of these pages has been prepared from an original which was unsuitable for direct photoreproduction.

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Figure 3

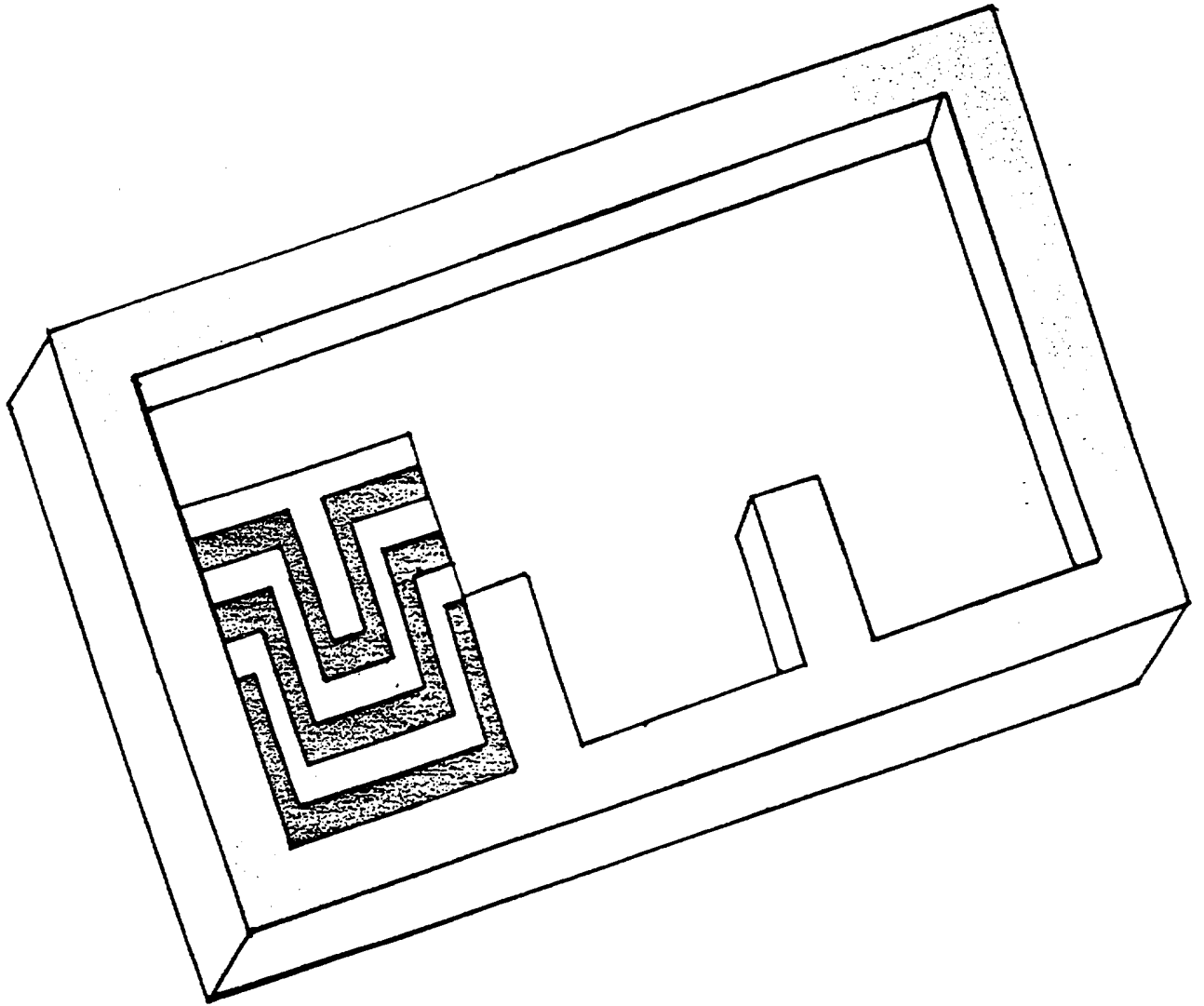
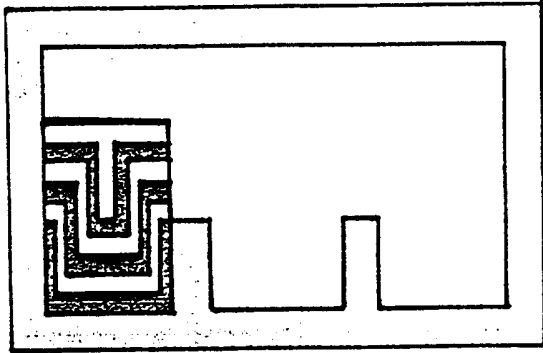
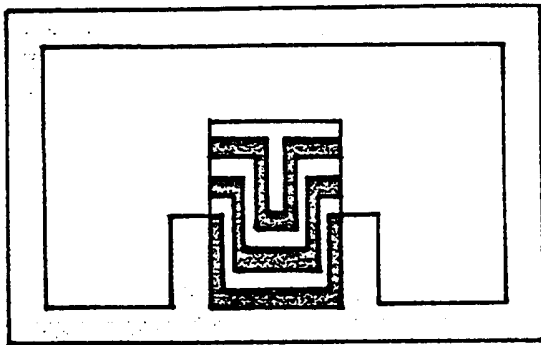


Figure 4



Move the BLOCK from left to centre



Move the BLOCK from centre to right

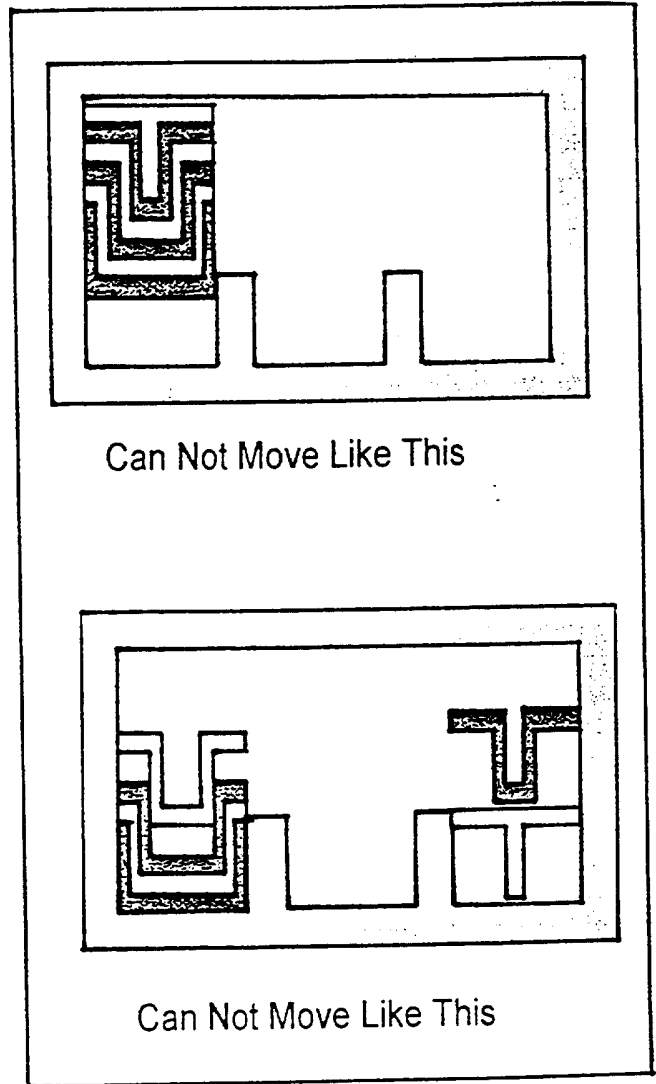
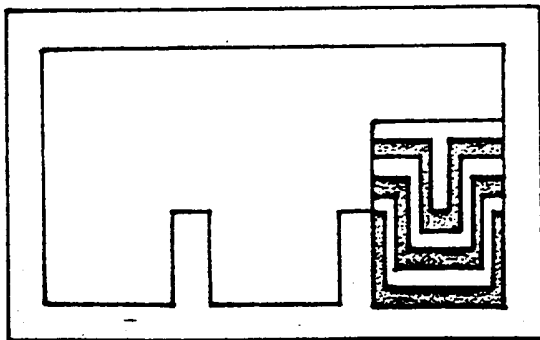
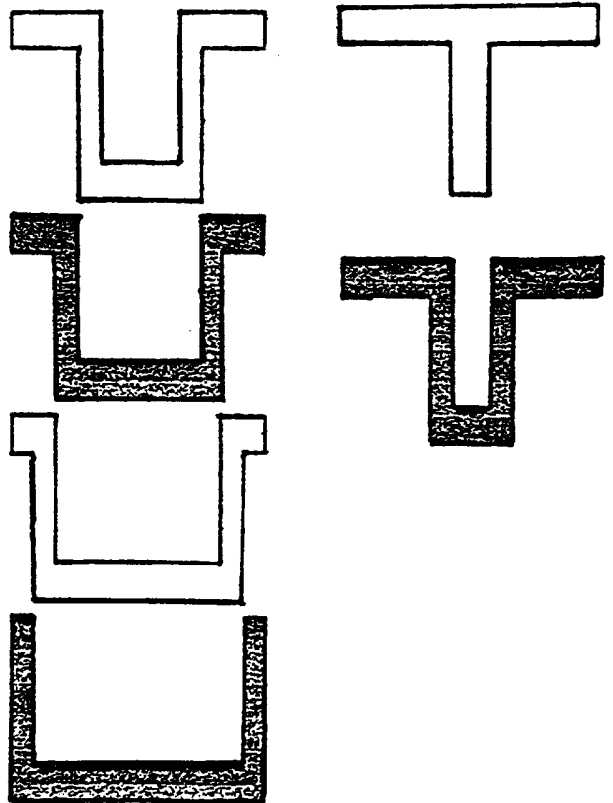
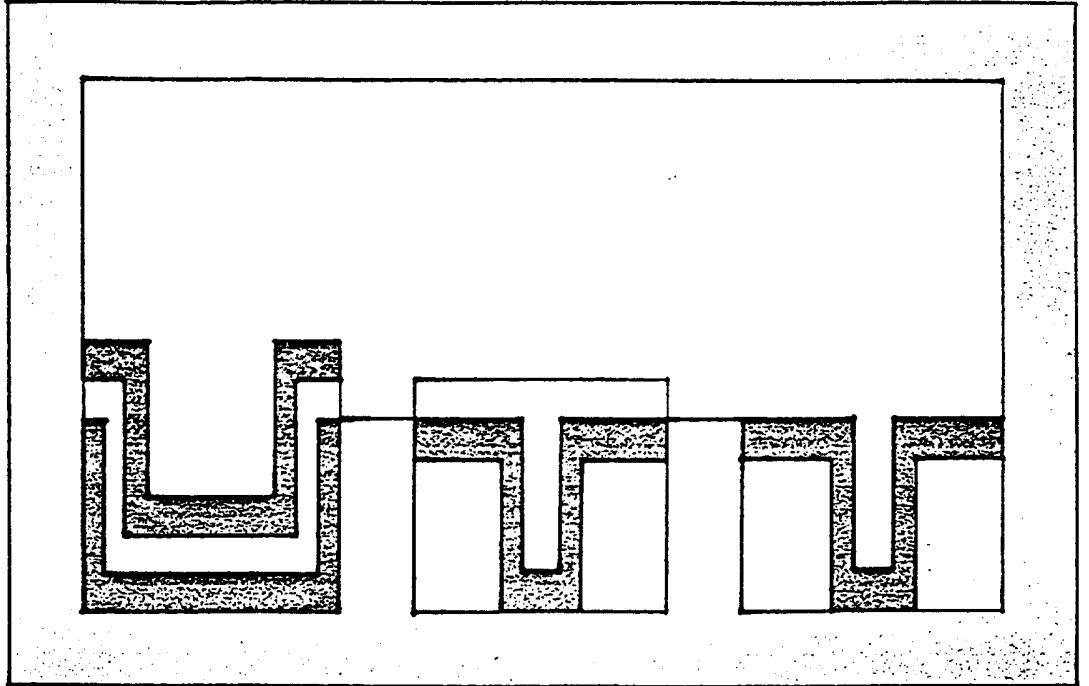


Figure 5



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Figure 6

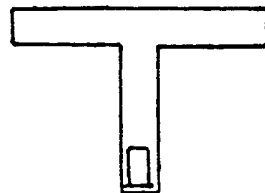
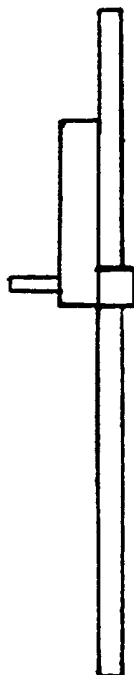
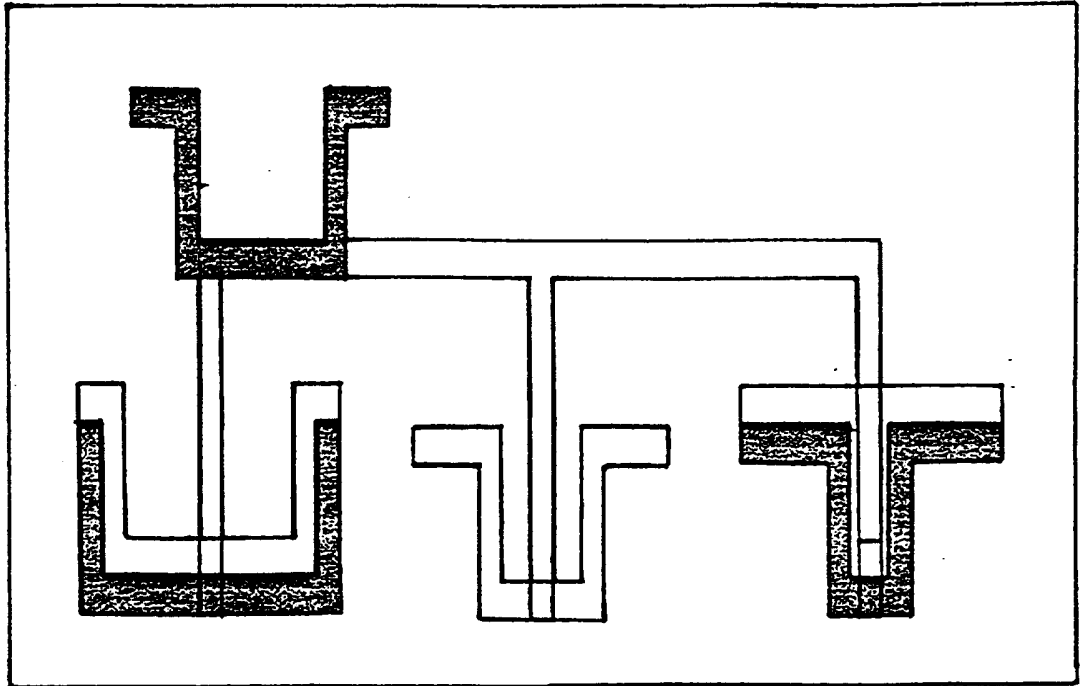


Figure 7

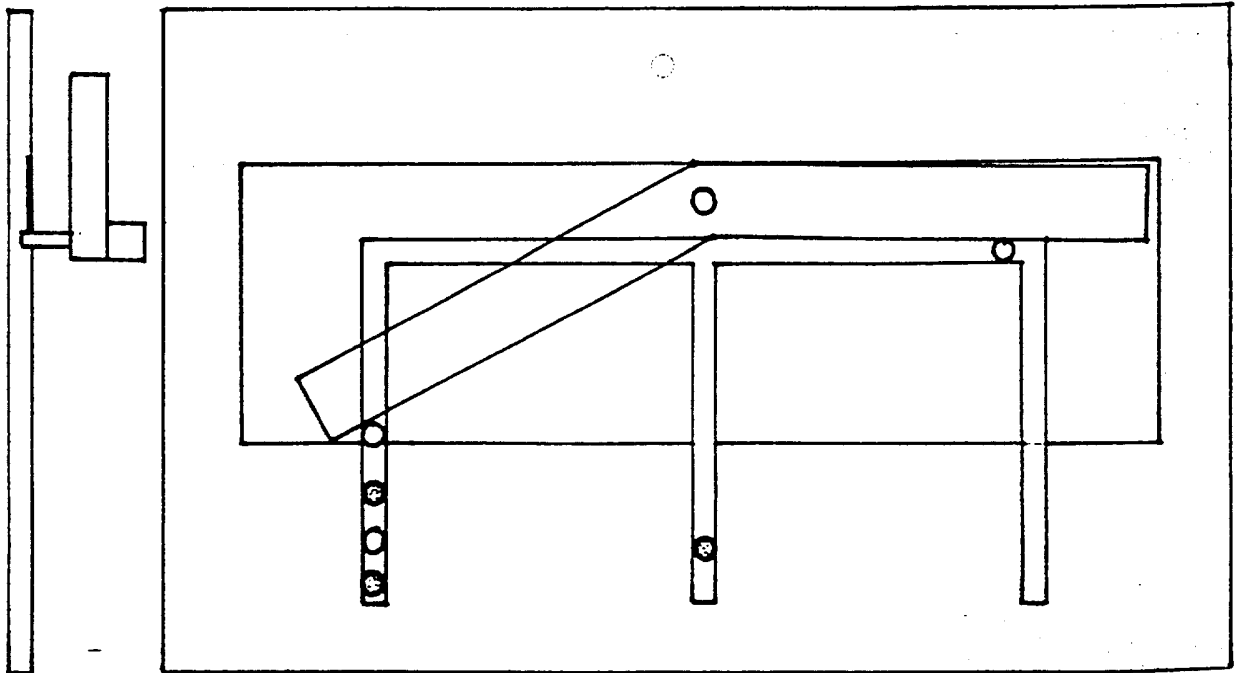
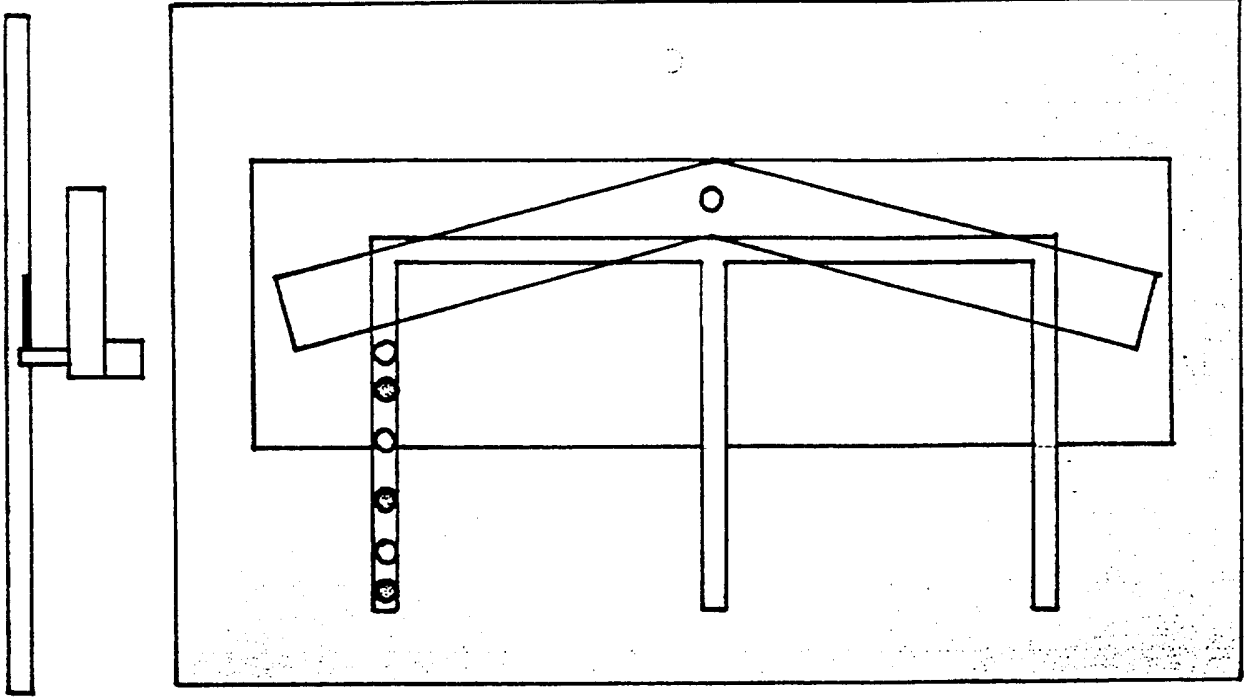


Figure 8

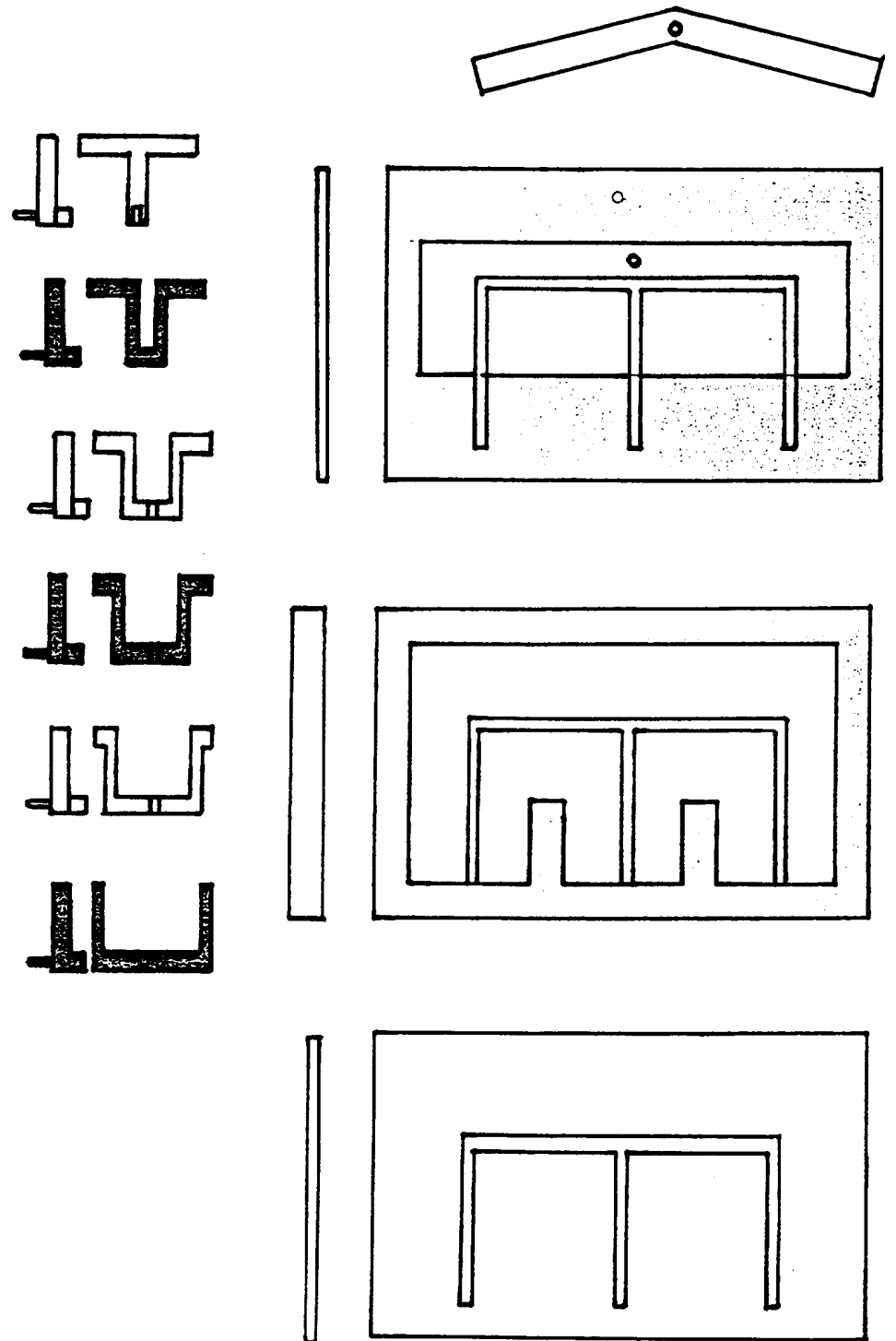
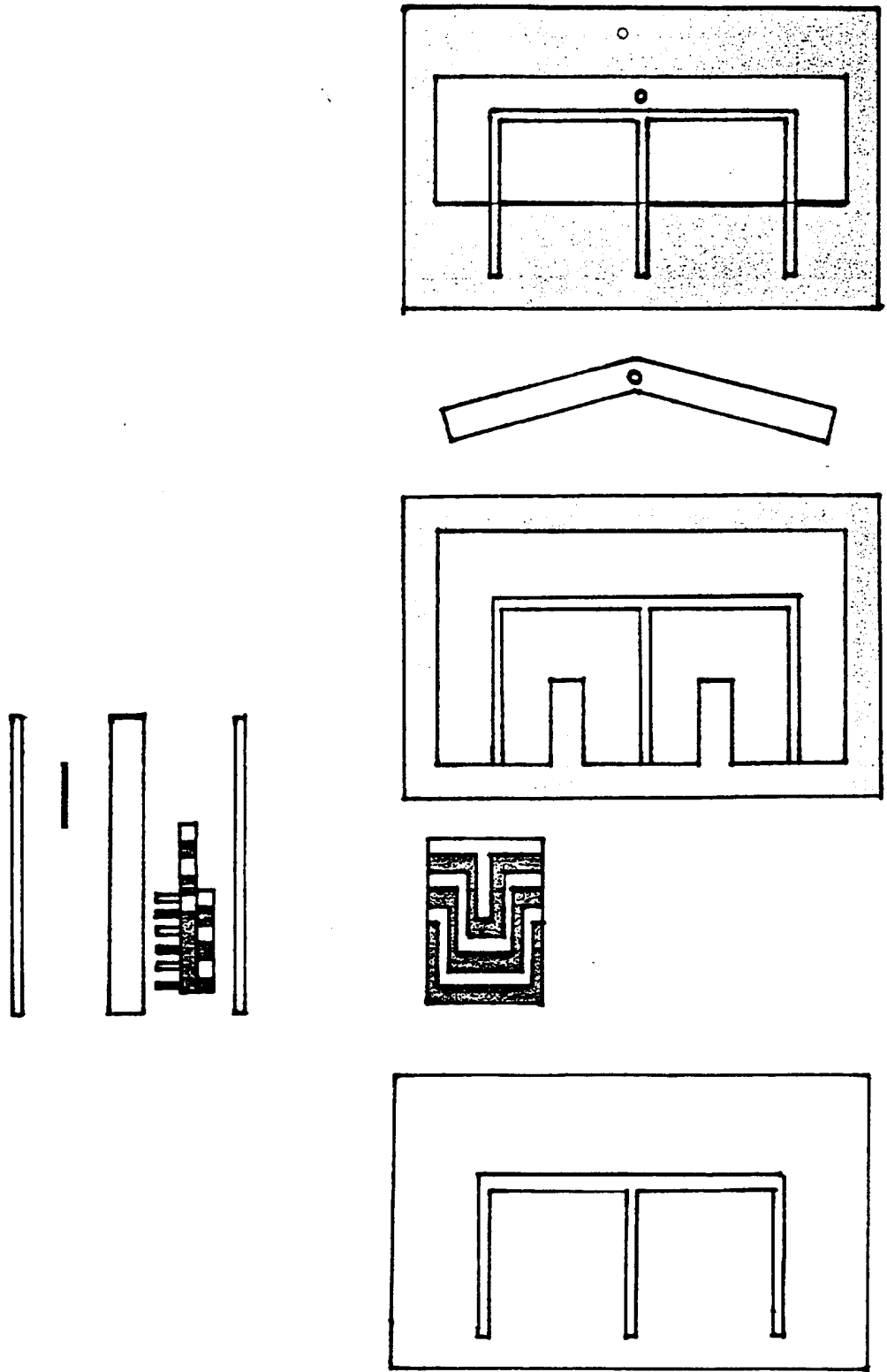


Figure 9





## FLEX - Y - MIND

The puzzle is designed to be manufactured easily.

The object is to move a BLOCK from the left position to the centre position and then to the right position.

The BLOCK is made from a number of pieces depending on the difficulty of the challenge. For the purpose of these drawings 6 PIECES are shown.

Colours are not important to the design but give a presentable appearance.

A unit has been manufactured using 6 pieces, the unit is shown in the video provided.

The **minimum correct** moves required, for the number of pieces, to move from one position to another are shown below.

PIECES	MOVES	PIECES	MOVES
3	7	10	1023
4	15	11	2047
5	31	12	4095
6	<b>63</b>	13	8191
7	127	14	16383
8	255	15	32767
9	511		Etc.

Each puzzle is manufactured with a fixed number of pieces.

The age group is for any age depending on the degree of difficulty.

For the very young ,as an educational toy using a 3 piece unit, the number of correct moves are 7.           The more pieces the greater the degree of difficulty to complete.

The construction of the puzzle is such that is does not allow any piece to be moved that is not permitted.

No larger piece can be moved to fit into a smaller piece, or be stored in a position that is not permitted.

### STATEMENT OF NOVELTY :

**The novelty lies in the shape and configuration of the article as shown in the representations.**

<b>Number</b>	<b>Description</b>
<b>Figure 1</b>	<b>Information</b>
<b>Figure 2</b>	<b>Introduction</b>
<b>Figure 3</b>	<b>The Puzzle</b>
<b>Figure 4</b>	<b>The Object</b>
<b>Figure 5</b>	<b>The Movement</b>
<b>Figure 6</b>	<b>Method of Movement</b>
<b>Figure 7</b>	<b>Interlock</b>
<b>Figure 8</b>	<b>Components</b>
<b>Figure 9</b>	<b>Assembly</b>

**Claims**

**A puzzle designed for various degree of difficulty depending on the amount of components, called pieces, used.**

**The object of the puzzle is to move pieces from one location to another location in sequence. If pieces are moved out of sequence, because of the design of the pieces and an interlock device the move will be inhibited.**

**The degree of difficulty in terms of pieces is as follows :-**

**Example of minimum moves required if moved in the correct sequence.**

<b>Pieces</b>	<b>Moves</b>
<b>3</b>	<b>7</b>
<b>6</b>	<b>63</b>
<b>10</b>	<b>1023</b>
<b>15</b>	<b>32767</b>

**Ref. Drawings FSD1 - 000 to FSD1 - 080**



Application No: GB 9609255.6  
Claims searched: The claims

Examiner: Alan Blunt  
Date of search: 3 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 (HKC)

Int Cl (Ed.6): A63F 9/06, 9/08

Other:

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
A	GB2250446A (PRAG) - whole document	the claims
X	US5261668 (HAUSAMMAN) - whole document	the claims

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.