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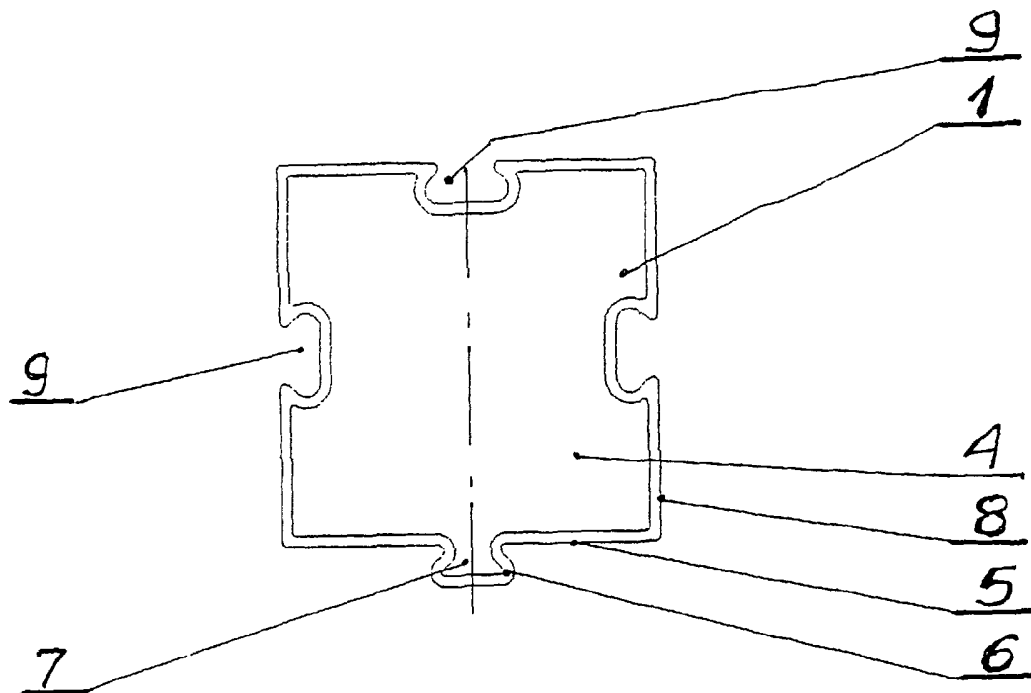
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BUILDING BLOCKS AND LINKING ELEMENTS



(57) Abstract: Building blocks having rectangular, triangular or circular shape. The sides of the building blocks have male and female dovetail connections. Linking elements match with the female connections to fasten two building blocks together. The linking elements can be monoblock or articulated to allow rotation between the two building blocks being connected.



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BUILDING BLOCKS AND LINKING ELEMENTS

The subject matter of the invention is the assembling set for matching toys

There are known assembling sets for matching toys, particularly the constructing structures which have the shape of rectangular prisms with flat or rounded side surfaces, wherein on one side of the surface are usually placed fastening pin elements in rows or in series.

There are known, from the Polish Patent Specification no 11 26 84 toy constructing elements having the shape of the rectangular prisms. They have, on one surface, channels extending to the interior of the constructing element, and on the opposite surface there are conical elements which have the outer surface outlining the inner surface of the channel.

From the Polish Patent Specification no. 136 429, are known assembling kits for matching toys they consist of the repeatable rectangular prism blocks having ports and seats, they are temporarily fastened via pins and circular catches.

There are known, from the Swiss Patent Specification no. 36 23 54 matching elements for the pattern of the construction, particularly for toys, wherein on one side of the surface wall element have at least one row of the clutching pivots and on the opposite surface of the wall there are clutching elements, in order to fasten clutching pivots to the neighbouring construction element.

The assembling set for matching toys has some groups of the repeatable structural elements and it is characterized by that, the first group consists of the modular rectangular prism elements, the second group – the modular prismatic elements having the triangular base, the

third group – the modular elements having the circular outline, wherein every element has the upper surface and the side surfaces, where the rectangular prism elements and the prismatic elements, preferably having the triangular base, have the flat upper surface where on the middle part of one side of the surface and along the symmetry axis has the fastening element which protrudes over the surface and has the outline of the flitch, and the front surface has the trapezoid outline where the rest of the side surfaces have the cavings in the middle part and along the symmetry axis, where the cavings have the flitch outline and the surface outline of the protruding fastening element, wherein the circular outline elements have on their upper surface holes which are radially and symmetrically directed, where on the side rolling surfaces are symmetrically placed the cavings having the outline of flitch where their surface outline is of the protruding fastening element.

The assembling set for matching toys has the linking element having along the longer symmetry axis the bottom part which is symmetrical, monolithic and it is parallelly or angularly situated, and it has the upper part having the outline of the flitch of the fastening element.

The assembling set for matching toys has the rotational linking element having the bottom part which has the flitch outline of the fastening element with the catching axial pivot and has the upper part having the flitch outline of the fastening element with the catching axial hole.

The assembling set for matching toys makes possible to fasten (optionally) all elements, and as an advantage, it provides the correct advancement of three – dimensional and constructive perception, particularly for children and provides the correct advancement of aesthetic perception through matching different colour elements.

The subject matter of the invention is shown in the example in the drawing wherein fig 1 shows the bottom view of the element which has the circular outline with ribs, fig 2- the bottom view of the rectangular prism element, fig 3 - the bottom view of the prismatic element, fig 4- the front view of the fastening element, fig 5 – the side view of the fastening element, fig 6 –the front view of the angular fastening element, fig 7- the side view of the

element from fig 6, fig 8 the top view of the element from fig 6, fig 9 – the side view of the bottom part having the rotational pivot of the fastening element, fig 10 – the top view of the bottom part from fig 9, fig 11- the side view of the upper part having the part of the fastening element, fig 12 – the top view of the upper part from fig 11, fig 13 – the top view of the rotational fastening element which closes the fastened upper part with the pivot and the bottom part with the hole.

The assembling set for matching toys has some groups of the repeatable structural elements and it is characterized by that, the first group consists of the modular rectangular prism elements /1/, the second group – the modular prismatic elements /2/ having the triangular base, the third group – the modular elements /3/ having the circular outline, wherein every element has the upper surface and the side surfaces, where the rectangular prism elements /1/ and the prismatic elements /2/, preferably having the triangular base, have the flat upper surface /4/ where on the middle part of one side of the surface /5/ and along the symmetry axis has the fastening element /6/ which protrudes over the surface /5/ and has the outline of the flitch, and the front surface /7/ has the trapezoid outline where the rest of the side surfaces /8/ have the cavings /9/ in the middle part and along the symmetry axis, where the cavings have the flitch outline and the surface outline of the protruding fastening element /6/, wherein the circular outline elements /3/ have on their upper surface /10/ holes /11/ which are radically and symmetrically directed, where on the side rolling surfaces /12/ are symmetrically placed the cavings /9/ having the outline of flitch where their surface outline is of the protruding fastening element /6/

The assembling set for matching toys has the linking element /13/ having along the longer symmetry axis the bottom part /14/ which is symmetrical, monolithic and it is parallelly or angularly situated, and it has the upper part /15/ having the outline of the flitch of the fastening element /6/

The assembling set for matching toys has the rotational linking element /16/ having the bottom part /17/ which has the flitch outline of the fastening element /6/ with the catching axial pivot /18/ and has the upper part /19/ having the flitch outline of the fastening element /6/ with the catching axial hole /20/.

Claims

1. The assembling set for matching toys has some groups of the repeatable structural elements and it is characterized by that, the first group consists of the modular rectangular prism elements /1/, the second group – the modular prismatic elements /2/ having the triangular base, the third group – the modular elements /3/ having the circular outline, wherein every element has the upper surface and the side surfaces, where the rectangular prism elements /1/ and the prismatic elements /2/, preferably having the triangular base, have the flat upper surface /4/ where on the middle part of one side of the surface /5/ and along the symmetry axis has the fastening element /6/ which protrudes over the surface /5/ and has the outline of the flitch, and the front surface /7/ has the trapezoid outline where the rest of the side surfaces /8/ have the cavings /9/ in the middle part and along the symmetry axis, where the cavings have the flitch outline and the surface outline of the protruding fastening element /6/, wherein the circular outline elements /3/ have on their upper surface /10/ holes /11/ which are radically and symmetrically directed, where on the side rolling surfaces /12/ are symmetrically placed the cavings /9/ having the outline of flitch where their surface outline is of the protruding fastening element /6/
2. The assembling set for matching toys according to claim 1 is characterized by that, it has the linking element /13/ having along the longer symmetry axis the bottom part /14/ which is symmetrical, monolithic and it is parallelly or angularly situated, and it has the upper part /15/ having the outline of the flitch of the fastening element /6/
3. The assembling set for matching toys according to claim 1 is characterized by that, it has the rotational linking element /16/ having the bottom part /17/ which has the flitch outline of the fastening element /6/ with the catching axial pivot /18/ and has the upper part /19/ having the flitch outline of the fastening element /6/ with the catching axial hole /20/.

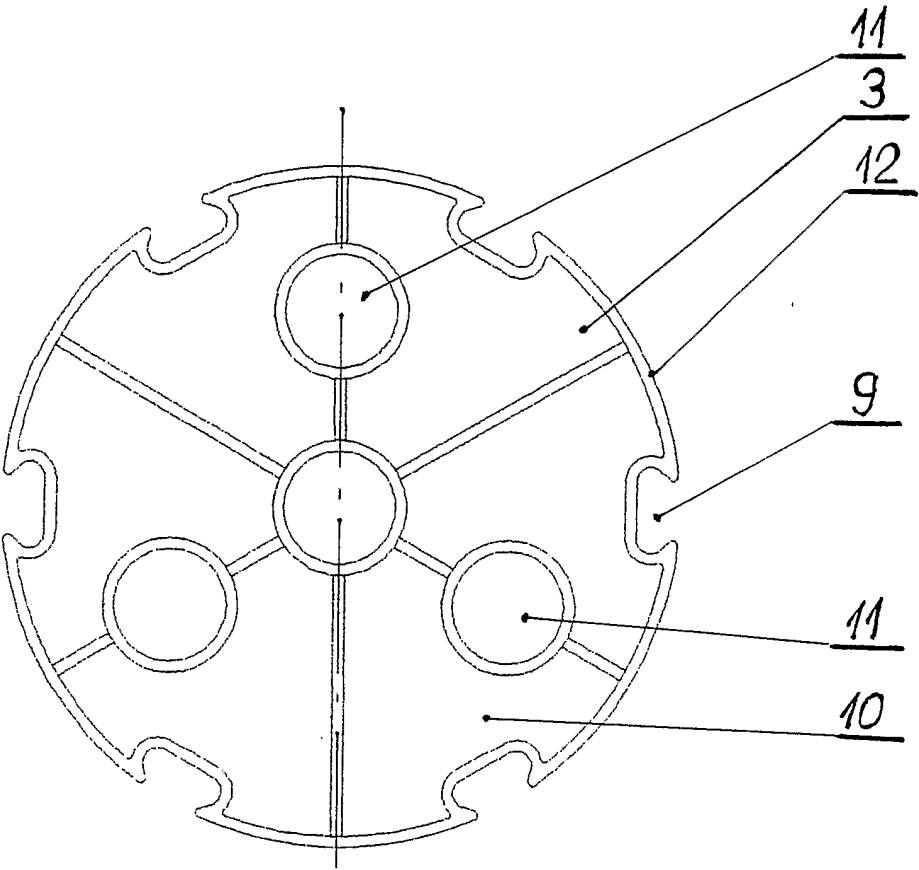


Fig. 1

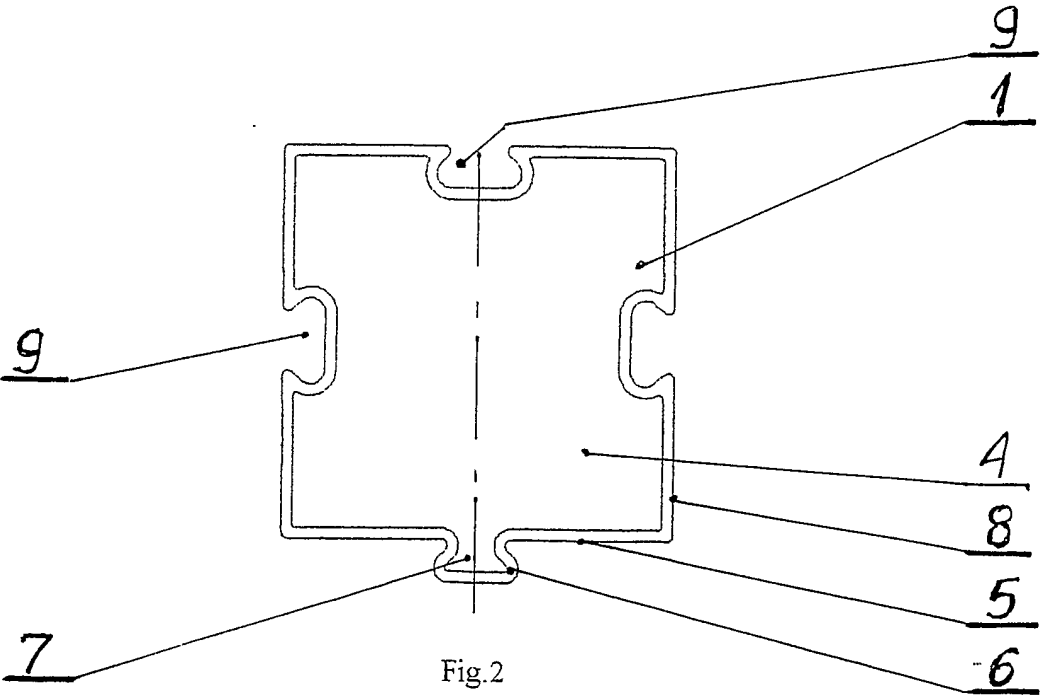


Fig. 2

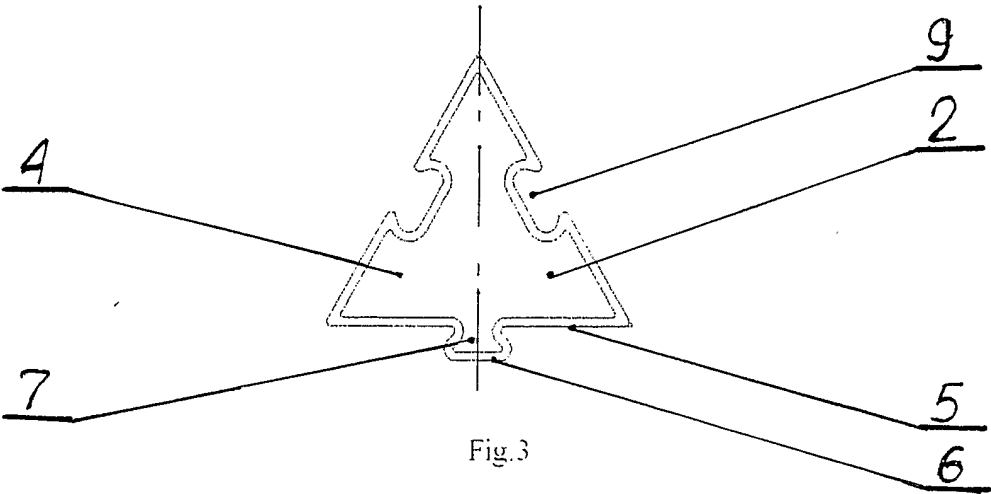


Fig.3

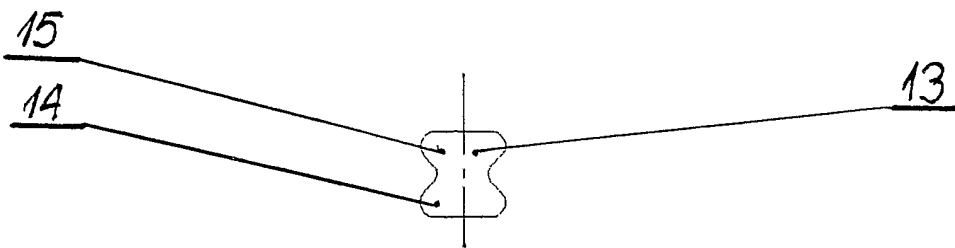


Fig.4

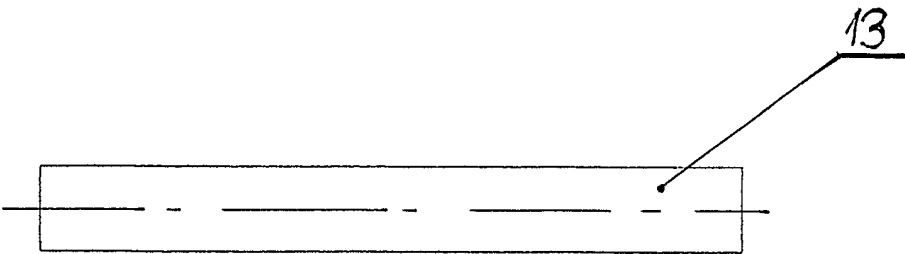
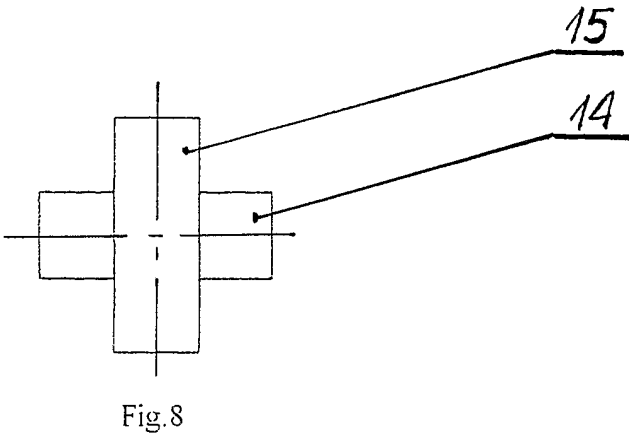
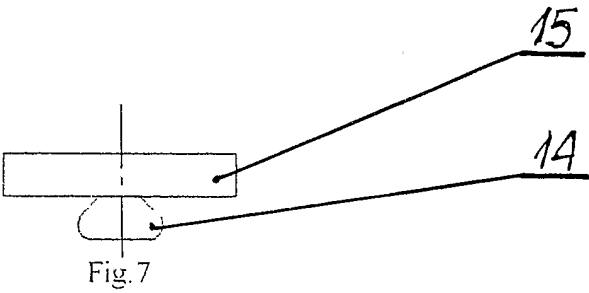
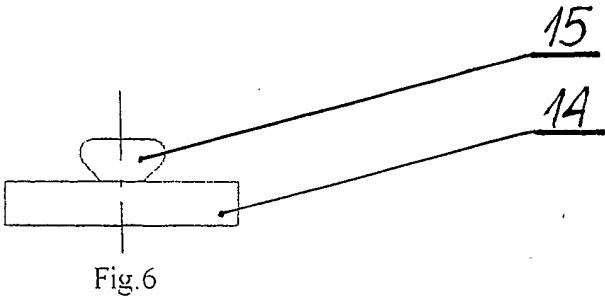


Fig.5



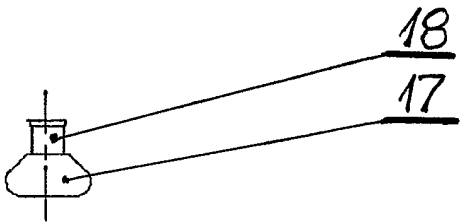


Fig.9

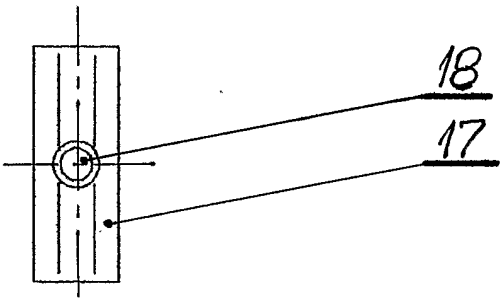


Fig.10

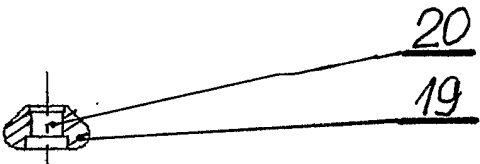


Fig.11

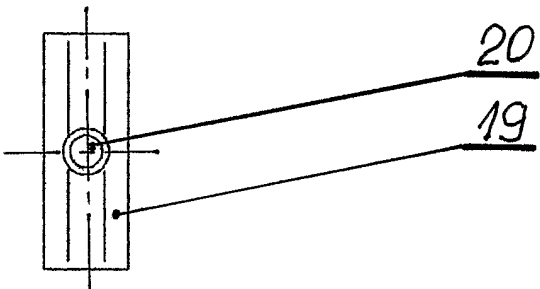


Fig.12

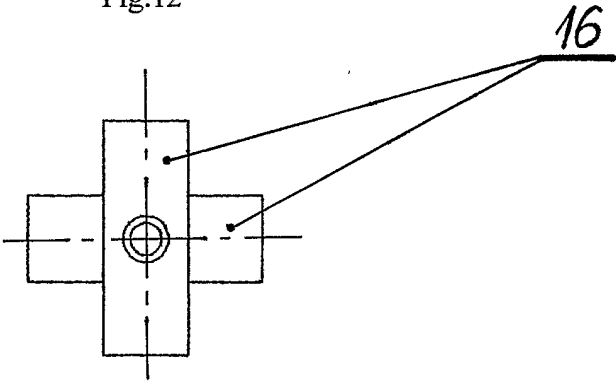


Fig.13

INTERNATIONAL SEARCH REPORT

International Application No

PCT/PL 02/00009

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A63H33/08 A63H33/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 653 621 A (YAO LI-HO) 5 August 1997 (1997-08-05)	1,2
Y	the whole document	3
Y	US 6 176 757 B1 (LIN TUNG-SHAO) 23 January 2001 (2001-01-23) column 2, line 60-62; figures 1,4,5	3
A	US 2001/021618 A1 (CLEVER ERIC ET AL) 13 September 2001 (2001-09-13) figures 19-21	2,3
A	US 5 957 744 A (BRIDGES MARTIN JOHN ET AL) 28 September 1999 (1999-09-28) figures 16,17	1

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☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

30 September 2002

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INTERNATIONAL SEARCH REPORT

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