

MODULAR CONSTRUCTION SYSTEM

The invention relates to a modular construction system, for instance for educational purposes or for use as toy, which system comprises at least two components for mutual releasable coupling by means of coupling means, which coupling means comprise:

two coupling edges forming part of a wall of the one component and also forming the boundary of one or two continuous holes in this wall; and

two coupling lips which are each adapted to be inserted in a or the continuous hole and which each comprise for this purpose at least one snap edge for co-action with an associated coupling edge such that after this co-action has been brought about the rearward displacement can only take place by exerting a certain minimum force in the direction of rearward displacement.

Such a construction system is known for instance from US-A-3 195 266. The problem in a system of this type is that the coupling between the diverse components can only be released with difficulty. In order to release the coupling a comparatively great force must be exerted simultaneously on both coupling edges of a set such that the coupling is released in substantially axial direction. In addition, the construction system according to the said American patent has no provision whereby the couplings between the components are always free of play and do not rattle.

The invention has for its object to provide a modular construction system which does not display the stated shortcomings of the known art. To this end the construction system according to the invention has the feature that in coupled situation the coupling edges and the coupling lips press against each other under bias with inclining coupling surfaces such that by rotation round the one set of coupling surfaces the contact

between the other set of coupling surfaces can be released,

a stop surface connects to a set of coupling lips, which stop surface presses in coupled situation with some force against at least a part of a coupling edge such that the coupling between the components is free of play, and

the components consist at least partially of plastic.

10 A preferred embodiment has the special feature that the coupling surfaces have a generally convex shape.

A specific embodiment has the special feature that the coupling edges and the coupling lips have inclining pressure surfaces on their sides remote from said coupling surfaces, which pressure surfaces can slide over each other to effect the coupling when a pressure force is applied. With this embodiment the coupling can be brought about by applying a pressure force depending on said inclining position. It will be apparent that the flexibility of the lips and the coefficient of friction of the surfaces sliding over each other also determine the required pressure force. This is also the case for the said decoupling.

20 A particular variant has the special feature that said pressure surfaces have a generally convex shape.

Particularly the embodiment in which both the coupling surfaces and the pressure surfaces have a generally convex shape can advantageously be embodied such that the coupling lips and parts of the coupling edges co-acting therewith have substantially the same shapes.

Particular embodiments can advantageously have the special feature that the coupling edges and the coupling lips are non-round such that coupled components are locked against relative rotation.

35 The embodiment is recommended in which the stop surface forms part of a flange plate.

A specific variant of this latter principle has the feature that the flange plate is permanent-magnetic. Ferromagnetic components can hereby be connected magnetically to a made structure.

5 An exceptional embodiment has the feature that the flange plate can be flush-mounted in a recess in the coupling edge.

This embodiment is preferably embodied such that the flange plate fits into the recess with little
10 play.

A specific embodiment has the feature that the one component comprises two sets of coupling lips present on either side of a flange plate and that the depth of said recess corresponds to half the thickness of the
15 flange plate such that two components coupled by the first mentioned component are positioned with their coupling edges in at least substantially mutually abutting relationship.

An alternative comprises tensioning means for
20 placing the lips under directed and great tension in the inserted situation such that the rearward displacement is only possible after the tensioning means have been deactivated.

This latter embodiment can have the feature
25 that the tensioning means can be controlled from outside by means of control means.

A specific embodiment has the special feature that the control means comprise indicator means for the active and the inactive state of the tensioning means,
30 which indicator means can be embodied for instance as colour coding means.

The construction system according to the invention preferably has the special feature that components consist of plastic, for instance ABS or
35 polypropylene (PP). The use of a very strong plastic such as ABS has the advantage that the lifespan of the components is very long, even in the case of prolonged and even rough use. When non-clamping or non-snapping

couplings are applied the hard ABS is a very good choice. In the case where demands are made of the resilience of the material, particularly in the case of clamp couplings or snap couplings, a softer, more resilient plastic can
5 be recommended. This can for instance be polypropylene.

A system with plastic components can have the special feature that components are manufactured by injection moulding.

An alternative can have the feature that
10 components are manufactured by extrusion, followed by division into pieces of the profiled prismatic rod manufactured by extrusion, and optionally followed by selective removal of chosen areas.

It should be appreciated that the term
15 "prismatic" is understood to mean a shape which at any position has the same cross-sectional form transversely of a principal direction.

The invention will now be elucidated with reference to the annexed drawing of a number of random
20 embodiments, to which the invention is not limited. In the drawing:

Fig. 1 shows a partly perspective view of a first embodiment;

Fig. 2 shows partly in side view, partly in
25 cross section the coupled components of fig. 1;

Fig. 3 is a perspective view of a second embodiment;

Fig. 4 shows a cross section IV-IV through the component of fig. 3 in coupled situation;

30 Fig. 5 is a partly broken away perspective view of a third embodiment;

Fig. 6 shows the cross section VI-VI according to fig. 5;

Fig. 7 is a partly broken away perspective view
35 of a fourth embodiment;

Fig. 8 is a perspective view of a fifth embodiment;

Fig. 9 shows a cross section through the divided block according to fig. 8 in mounted situation;

Fig. 10 is a partly perspective view of a sixth embodiment;

5 Fig. 11 shows partly a top view, partly a cross section of the block of fig. 10;

Fig. 12 shows a cross section perpendicularly of the plane of the section according to fig. 11 of the block according to fig. 10 in mounted situation;

10 Fig. 13 is a view corresponding with fig. 1 of a seventh embodiment, wherein the manner of manufacture by extrusion is also shown;

Fig. 14 is a perspective view of an eighth embodiment;

15 Fig. 15 is a view corresponding with fig. 2 of a ninth embodiment;

Fig. 16 is a perspective view of a tenth embodiment which consists of a plurality of sub-components;

20 Fig. 17 is a perspective view of an eleventh embodiment;

Fig. 18 is an exploded view of the twelfth embodiment;

25 Fig. 19 is a perspective view of a thirteenth embodiment;

Fig. 20 is a perspective view of a fourteenth embodiment;

Fig. 21 shows partly in transparent view a perspective view of a fifteenth embodiment;

30 Fig. 22 shows a cross section in expanded situation of the component of fig. 21;

Fig. 23 shows a view corresponding with fig. 22 of the component in non-expanded situation;

35 Fig. 24 is an exploded view of a sixteenth embodiment;

Fig. 25 is an exploded view of a seventeenth embodiment;

Fig. 26 shows an exploded view of an eighteenth embodiment which is similar to the sixteenth embodiment according to fig. 24;

Fig. 27 shows a partly broken away exploded
5 view of a nineteenth embodiment;

Fig. 28 shows a partially exploded view of a twentieth embodiment which is similar to the eighteenth embodiment according to fig. 26;

Fig. 29 shows a partially exploded view of the
10 sub-components from which the frame of fig. 28 is constructed;

Fig. 30 is a partly perspective view of a twenty-first embodiment;

Fig. 31 is a partly perspective view of a frame
15 in a twenty-second embodiment;

Fig. 32 is a partly perspective view of a frame in a twenty-third embodiment;

Fig. 33 is a perspective view of a frame in a twenty-fourth embodiment;

Fig. 34 is a partly perspective view of a
20 twenty-fifth embodiment;

Fig. 35 shows the embodiment according to fig. 34 in cross-sectional view;

Fig. 36 is a perspective view of a twenty-sixth
25 embodiment;

Fig. 37 is a perspective view of a twenty-seventh embodiment;

Fig. 38 is a perspective view of an assembly of components as according to fig. 37;

Fig. 39 is a perspective view of an assembly of
30 components as according to fig. 36;

Fig. 40 is a perspective view of a twenty-eighth embodiment;

Fig. 41 is a perspective view of a twenty-ninth
35 embodiment;

Fig. 42 is a perspective view of an assembly of components as according to fig. 40;

Fig. 43 shows a building brick according to the invention in a thirtieth embodiment;

Fig. 44 shows an assembly of building bricks in accordance with a thirty-first embodiment;

5 Fig. 45 shows a perspective view, partly in exploded view, of a building structure according to the invention;

Fig. 46 shows five building bricks according to the invention, all according to a thirty-second
10 embodiment but with different dimensions;

Fig. 47 shows an exploded view of a building brick according to the invention consisting of two identical parts in a thirty-third embodiment;

Fig. 48 shows a partly broken away perspective
15 view of a thirty-fourth embodiment;

Fig. 49 shows a thirty-fifth embodiment in perspective view, wherein the composite parts are drawn at some mutual distance;

Fig. 50 is a perspective view of the assembled
20 building brick according to fig. 49;

Fig. 51A is a perspective view of a thirty-sixth embodiment;

Fig. 51B shows a side view thereof;

Fig. 52A shows a side view of a variant of the
25 embodiment of fig. 51;

Fig. 52B shows an example of an application of the building brick of fig. 52A;

Fig. 52C shows a top view of the building brick of fig. 52A;

30 Fig. 53 is a partly perspective view of a thirty-seventh embodiment, wherein two building bricks are supported by a screw spindle and are axially movable in rotation thereof;

Fig. 54 is a perspective view of a thirty-eighth embodiment, the principle of which corresponds
35 with the embodiment of fig. 53; and

Fig. 55 is a partly perspective view of a thirty-ninth embodiment.

In all the figures functionally identical components are designated as far as possible with the same reference numerals.

Fig. 1 shows a coupling block 1 and a frame 2, both components of a modular construction system according to the invention. Frame 2 comprises a continuous hole 3 which is bounded by four mutually perpendicular coupling edges which are all designated with 4 and all have the shown stepped structure.

Coupling block 1 has a central plate 5, the thickness of which is twice as great as the depth of the first step 6.

As shown in fig. 2, two frames 2 can be mutually coupled in this manner without interspaces by means of coupling block 1. Plate 5 has on each of both sides two coupling lips 7 with rounded outer edges 8. In the manner shown in fig. 2, these lips can be placed into snapping co-action with the inner steps 9. The snapping co-action is ensured by the shown rounded shape of outer edges 8. The coupling between block 1 and frame 2 can be released from the situation shown in fig. 2 only by exerting a relatively great force.

Fig. 3 shows a coupling block 10, of which the coupling lips 11 with the rounded outer edges 8 can be placed into snapping co-action with frame 2 as shown in fig. 4, but wherein the rearward displacement can, if desired, be blocked by tensioning means embodied as an eccentric cam element 12 which can be rotated by means of a tool 13 which is inserted into a correspondingly shaped hole 14. Due to this rotation the extreme faces of cam 12 press against correspondingly curved convex surfaces 15 with relatively large radius of curvature of the lips 11, whereby these latter are effectively driven apart, and the inward directed displacement is in any case blocked. Only by deactivating the described tensioning means can the coupling of fig. 4 be undone.

Fig. 5 and 6 show the use of a coupling block 16 which is embodied single-sided but is based on the

same principle as coupling block 10. Use is made in this embodiment of a right-angled transmission with two co-acting bevel gears 17 which positively couple cam element 12 via corresponding shafts 18 to an externally
5 accessible control element 18.

Fig. 7 shows a variant in which a coupling block 19 comprises a cam element 12 which is rotatable by means of a tooth wheel 20 which is arranged on shaft 18 and which co-acts with a rack 21 forming part of an
10 axially displaceable control rod 22 which has a length such that in the inactive situation of cam 12 the one part of the rod protrudes outside the structure and in the active situation the other part protrudes. It is thus always clear to the user which movement he must perform
15 to place the tensioning means into the situation other than the prevailing one. To avoid ambiguity both ends of rod 22 can be provided with clearly recognizable differing colours in order to indicate respectively the active and inactive situation of the tensioning means.

Fig. 8 shows an embodiment in which a coupling block 23 takes a divided form. Cam element 12 is embodied as according to the second embodiment of fig. 3. The outer edges 8 form in this embodiment the coupling lips, which however are not elastic, so the coupling
25 respectively decoupling can only be effected by rotation of the cam 12. This is supported by a disc 25 which mutually connects the identical parts 24 of block 23 by friction. The coupling block 23 in divided form comprises ribs 71, 72 which fit in the manner shown in fig. 9 into
30 a framework consisting of two parts 73, 74. In the manner drawn a tight fit can be obtained with the outer edges 8.

Fig. 10 shows a coupling block 29 wherein covers 26 are moulded on the ends of the, in this embodiment prismatic, form, which covers are connected to
35 the main form by foil hinges. Covers 26 take a form such that they can be placed snappingly into the space defined by the coupling lips 7. It is noted that elevations 27 present as according to fig. 1 are absent in this

embodiment. As fig. 11 shows, an arranged cover 26 can be removed with a tool 28.

Fig. 12 shows the situation of fig. 11 in a cross section which is directed perpendicularly of the cross section of fig. 11.

Fig. 13 shows an embodiment in which a coupling block 30 takes an essentially prismatic form. The elevations 27 are absent here. Block 30 is manufactured from an extrudate 31 which is shortened successively at fixed separating zones 32, whereafter zones 33 are removed to obtain steps 34.

Fig. 14 shows that a block 35 consists of three parts, i.e. a separate plate 5 and two identical lip units 36 which are connected to plate 5 by means of coupling shaft 37. Thus obtained is a structure consisting of three components which can be grouped in a manner identical to block 30. In this embodiment the lip units 36 are however rotatable at any desired angle relative to plate 5.

Fig. 15 shows an embodiment wherein the inner steps 38, in contrast to the inner steps 6 of fig. 2, have rounded shapes. This facilitates the effecting and release of the coupling.

Fig. 16 shows a variant of the eighth embodiment of fig. 14. Plate 5 and lip units 36 are here mutually coupled by means of dovetail joints.

Fig. 17 shows a block 39 having on one side a lip unit 40 and on the other side a sleeve 41, for instance for rotatably receiving a shaft.

Fig. 18 shows an embodiment which forms an effective combination of the first embodiment according to fig. 1 and the eleventh embodiment according to fig. 17.

Fig. 19 shows an embodiment wherein two blocks 41, 42 are hingedly coupled to each other by means of a hinge 43.

Fig. 20 shows a fourteenth embodiment wherein blocks 44 are embodied identically and each have a

structure which is similar to the tenth embodiment of fig. 16. Blocks 44 are each supported by supports 45 by means of a dovetail joint. Both supports are identical and face in opposing directions and together with a pivot
5 shaft 46 define a hinge. It is noted that a hinge of any type whatsoever can also extend on mutually facing edges of blocks.

Fig. 21, 22 and 23 show a block 47 which, like the fifth embodiment as according to fig. 8, is
10 expandable by means of an eccentric element. A rotatable disc 48 has two inclining pressure surfaces 49 which co-act with corresponding inner surfaces 50 of the halves 51 of block 47. Fig. 22 and 23 show respectively the expanded and non-expanded situation. Disc 48 has a ribbed
15 peripheral surface, whereby a user is able to apply the desired rotation force with his fingers. Alternatively, use can also be made of one or more protrusions.

Fig. 24 shows a coupling block 52 which can be coupled on one side to frame 2 and on the other side
20 comprises two coupling lips 53 for coupling to a plate 54 with frame 55.

Fig. 25 shows a variant in which a coupling block 56 comprises four pairs of coupling lips 57. A maximum of four plates 55 can herewith be coupled to each
25 other. One plate can also run along the whole width or length of block 56 in the manner according to fig. 24, while two other plates can extend as far as this continuous plate.

Fig. 26 shows a frame 58 with four continuous
30 holes 3 as according to inter alia fig. 1. A coupling block 1 is received snappingly herein.

Fig. 27 shows two plates 59 which can be coupled to a coupling piece 60 which can be coupled to the peripheral edges of holes 3, as according to for
35 instance fig. 1. The thickness of plate 61 corresponds with the depth of step 62 and the mutually facing edges of holes 3 have a similar recess. Plates 59 can thus be mutually coupled such that the bottom surfaces do not

display any protruding portions, which would be the case with the above described blocks. Even a block 1 as according to fig. 1 taking a single-sided form would not meet the criterion of absence of protruding portions, since the plate 5 has a thickness amounting to twice the depth of step 9.

It will now be apparent that frame 58 according to fig. 26 can couple four plates to each other. Similarly to plates 59, these plates are provided with holes 3 in their angular points.

Fig. 28 shows the coupling between a coupling block 1, a frame 2 and a plate 63.

Fig. 29 shows that frame 2 can be embodied as two parts 64,65 manufactured by injection moulding and mutually connectable by pin-hole connections. Pins 66 and the associated holes (not shown) can also be omitted, in which case glue connections can for instance be applied. This has the advantage that parts 64,65 can be identical. Any suitable connection technique is in principle applicable. Use can for instance also be made of snap connections, clamp connections, weld connections or the like.

Fig. 30 shows an embodiment wherein a coupling block 67 has a substantially rotation-symmetrical form. The shape of continuous hole 68 in frame 69 with associated steps is adapted thereto. Fig. 30 shows clearly that block 67 comprises a comparatively large continuous hole 70, this being important in the case of use of this embodiment as child's toy. If a small child were to swallow block 67, the hole 70 would remain open as passage for air so that suffocation is out of the question. The structure shown in fig. 30 is preferably embodied such that ribs 75, 76 have a chamfering on their side directed axially outward which acts as positioning edge, whereby they are easily able to pass over the internal step 77 in frame 69. Shown schematically is that once an assembly of block 67 and frame 69 has been fixed it can be separated by pressing together the lips 78 by

making use of a schematically designated tool 79 to be pushed axially.

Fig. 31, 32 and 33 show alternative frames 71, 72 and 73.

5 The block 67 according to fig. 30 is suitable for co-action with the schematically designated holes 68 in the frame or the building brick 72. It is noted that the edges of holes 68 are only shown schematically but in accordance with the teaching of the invention have a
10 sectional form for instance as shown in fig. 2.

Due to the presence of recesses 84 the block or the building brick 67 can be received locked against rotation in a hole 68. In this case at least one protrusion may be present under the ribs 30 of building
15 brick 67, this protrusion fitting into a recess 84.

Another manner of locking against rotation is obtained with the non-round shapes of the holes 85 as according to fig. 31, with which correspondingly shaped building bricks can co-act.

20 Fig. 34 and 35 show a twenty-fifth embodiment. The shown coupling block 80 has a prismatic form and corresponds in this sense with the seventh embodiment according to fig. 13. Compared with the coupling block 30 shown there, the coupling lips 81 are elongated. By
25 analogy with that discussed with reference to fig. 30, it is possible by pressing axially as according to arrow 83 making use of a tool 82 to achieve the removal of coupling lips 81 from their resilient clamping position relative to frame 2 as shown in fig. 35, whereby coupling
30 block 80 can be removed from frame 2 by exerting a continued axial pressure force.

The tool 82 can also be embodied such that said axial force is obtained by rotating the tool.

35 Fig. 36 shows a building brick 86, the special features of which do not have to be discussed in detail in view of the corresponding description of the relevant functional aspects thereof with reference to above described embodiments.

It is generally remarked that a particular embodiment attempts to embody all coupling edges and coupling lips in correspondence with each other. All complementary building bricks can hereby be coupled to
5 each other. Another embodiment comprises for instance a plurality of building bricks each provided with at least two differently dimensioned coupling edges and/or coupling lips.

Fig. 37 shows a variant 87 which differs from
10 the embodiment of fig. 36 in that top and bottom are open instead of closed.

Fig. 38 and 39 show examples of applications in which the building bricks according to fig. 37 and 36 respectively are mutually coupled. It will be apparent
15 that the system according to the invention enables many other combinations.

Fig. 40 shows a single variant 88 of the embodiment according to fig. 37.

Fig. 41 shows a single variant 89 of the
20 embodiment according to fig. 36.

Fig. 42 shows an assembly of the building bricks 88 according to fig. 40.

Fig. 43 shows a building brick 90 with two diagonally crossed sets of coupling edges and coupling
25 lips.

Fig. 44 shows a plurality of building bricks 91 which are mutually connected in longitudinal direction respectively transverse direction.

Fig. 45 shows yet another example of a building
30 structure with building bricks according to the invention.

Fig. 46 shows five building bricks 92, 93, 94, 95 and 96 with a generally elongate form which are provided on their end zones with holes with coupling
35 edges.

Fig. 47 shows a perspective view of a building brick consisting of two identical parts 97, 98.

As described with reference to fig. 29, the parts 97, 98 are manufactured by injection moulding and are mutually connectable by pin-hole connections.

Fig. 48 shows a building brick 99 wherein the coupling edges form part of respective frames 100 which are embodied as inserts. Reference is also made in this context to the description of fig. 55 hereinbelow.

Fig. 49 shows an embodiment wherein a permanent-magnetic flange plate 101 can be coupled to separate plates 102, 103 which are provided with coupling lips. In this respect reference is made by way of explanation to for instance fig. 1 and 2. Plates 102, 103 can be connected to magnetic flange plate 101 by for instance a glue connection. Use can also be made of for instance a snap coupling, wherein plates 102, 103 mutually connect via the continuous hole 104 in flange plate 101.

Fig. 50 shows the thus obtained building brick 105.

Fig. 51A and 51B show building brick 106, wherein the respective coupling edges are rotated relatively through 90°.

This same structure can be found in the building brick 107 according to fig. 52.

Fig. 52B shows the coupling of two building bricks 107 to a plate 108 with a continuous hole with corresponding coupling edges.

Fig. 53 shows a screw spindle 109 carrying two building bricks 110, 111 co-acting therewith as nuts. Through rotation of the nut the building bricks 110, 111 move toward and away from each other because the associated screw threads 112, 113 have opposed orientation.

Fig. 54 shows a variant wherein the building bricks 114, 115 take a two-sided form as according to for instance fig. 1 and 2, while building bricks 110 and 111 are embodied single-sided.

Finally, fig. 55 shows a building brick 114 which is built up of identical walls 115 and plates 117 which are for anchoring therein via slotted holes 116 and which have continuous holes with coupling edges.

5 It will be apparent that the invention is not limited to the drawn and described embodiments.

CLAIMS

1. Modular construction system, for instance for educational purposes or for use as toy, which system comprises at least two components for mutual releasable coupling by means of coupling means, which coupling means
5 comprise:

two coupling edges forming part of a wall of the one component and also forming the boundary of one or two continuous holes in this wall; and

two coupling lips which are each adapted to be
10 inserted in a or the continuous hole and which each comprise for this purpose at least one snap edge for co-action with an associated coupling edge such that after this co-action has been brought about the rearward displacement can only take place by exerting a certain
15 minimum force in the direction of rearward displacement,

characterized in that

in coupled situation the coupling edges and the coupling lips press against each other under bias with inclining coupling surfaces such that by rotation round
20 the one set of coupling surfaces the contact between the other set of coupling surfaces can be released,

a stop surface connects to a set of coupling lips, which stop surface presses in coupled situation with some force against at least a part of a coupling
25 edge such that the coupling between the components is free of play, and

the components consist at least partially of plastic.

2. Construction system as claimed in claim 1,
30 **characterized in that**

the coupling surfaces have a generally convex shape.

3. Construction system as claimed in claim 1,
characterized in that



the coupling edges and the coupling lips have inclining pressure surfaces on their sides remote from said coupling surfaces, which pressure surfaces can slide over each other to effect the coupling when a pressure
5 force is applied.

4. Construction system as claimed in claim 3,
characterized in that
said pressure surfaces have a generally convex
shape.

10 5. Construction system as claimed in claims 2
and 4,

characterized in that
the coupling lips and parts of the coupling
edges co-acting therewith have substantially the same
15 shapes.

6. Construction system as claimed in claim 1,
characterized in that
the coupling edges and the coupling lips are
non-round such that the coupled components are locked
20 against relative rotation.

7. Construction system as claimed in claim 1,
characterized in that
the stop surface forms part of a flange plate.

8. Construction system as claimed in claim 7,
25 **characterized in that**
the flange plate is permanent-magnetic.

9. Construction system as claimed in claim 7,
characterized in that
the flange plate can be flush-mounted in a
30 recess in the coupling edge.

10. Construction system as claimed in claim 9,
characterized in that
the flange plate fits into the recess with
slight play.

35 11. Construction system as claimed in claim 9,
characterized in that

the one component comprises two sets of coupling lips present on either side of a flange plate and that the depth of said recess corresponds to half the thickness of the flange plate such that two components
5 coupled by the first mentioned component are positioned with their coupling edges in at least substantially mutually abutting relationship.

12. Construction system as claimed in claim 1,
characterized by
10 **tensioning means** for placing the lips under directed and great tension in the inserted situation such that the rearward displacement is only possible after the tensioning means have been deactivated.

13. Construction system as claimed in claim 12,
15 **characterized in that**
the tensioning means can be controlled from outside by means of control means.

14. Construction system as claimed in claim 12,
characterized in that
20 **the control means** comprise indicator means for the active and the inactive state of the tensioning means, which indicator means can be embodied for instance as colour coding means.

15. Construction system as claimed in claim 1,
25 **characterized in that**
components consist of plastic, for instance ABS or polypropylene (PP).

16. Construction system as claimed in claim 1,
characterized in that
30 **components** are manufactured by injection moulding.

17. Construction system as claimed in claim 1,
characterized in that
35 **components** are manufactured by extrusion, followed by division into pieces of the profiled prismatic rod manufactured by extrusion, and optionally followed by selective removal of chosen areas.
