

#### Search history

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Search orthogonal (Results 601250)

4:

Search block or brick or panel or module (Results 1000000)

5:

Search 4 and 5 (Results 316836)

6:

Search slot or groove (Results 1000000)

7:

Search 6 and 7 (Results 82712)

8:

Search parallelepiped\* (Results 143900)

9:

Search 8 and 9 (Results 3574)

10:

Search IC=(E04C or E04B) (Results 586518)

11:

Search 10 and 11 (Results 134)

12:

Search interlock\* (Results 594653)

13:

Search 12 and 13 (Results 48)

14:

#### 1) Family number: 21381733 (FR1280784A)

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**Title:** PROCEDE ET OUTILLAGE DE FABRICATION D'ELEMENTS POUR LA CONSTRUCTION ET ELEMENTS OBTENUS METHOD AND TOOLS FOR PRODUCTION ELEMENTS FOR CONSTRUCTION AND ELEMENTS OBTAINED (Machine translation)

**Abstract:** Source: FR1280784A [FR] (Claim 1) 1. Il est parfois necessaire de pouvoir disposer de plaques de finition 67, susceptibles d'etre sciees a longueur comme les poteaux et d'etre rabotees sur les deux faces a la demande. Ces plaques 67 comportent une armature mediane 68 en grillage sur laquelle sont moules deux blocs parallelepipediques 69 et 70, en platre cellulaire, enrobant a mi-epaisseur l'armature 68. Ces blocs sont separes l'un de l'autre, de maniere a delimiter des rainures 71 et 72 de meme section que les rainures 2 et 3 precitees. Diverses modifications peuvent, d'ailleurs etre apportees aux formes de realisation, representees et decrites en detail, sans sortir du cadre de l'invention. RESUME L'invention a pour objet: I. Un procede de fabrication d'elements pour la construction, caracterise en ce qu'au moins une nappe de grillage est fixee sur un support d'armature, l'ensemble etant place dans un outillage formant gabarit de maintien et moule pour la coulee d'un bloc de platre cellulaire enrobant intimement l'ensemble d'armature et d'un enduit de revetement des faces de ce bloc, afin de former l'element proprement dit qui est ensuite seche, soit a l'air libre, soit par ventilation, puis durci, par immersion dans une solution fluatee en ebullition, et a nouveau seche. II. Un outillage pour la mise en uvre du procede, constitue par un support muni de languettes saillantes penetrant dans des rainures de l'armature pour le maintien et, eventuellement, la conformation de cette derniere, cet outillage comportant, en outre, des plaques de verre amovibles et reglables en position qui forment les parois, correspondant aux faces visibles de l'element de construction, d'un moule delimite egalement par le support. III. Un element pour la construction, remarquable notamment par les caracteristiques suivantes, considerees separement ou en combinaison: 1 L'armature de l'element, tel que panneau, est constituee par un cadre en bois recouvert, sur ses deux faces, par des nappes de grillage debordant de ce cadre afin de delimitier des rainures pour la mise en place d'elements males de liaison du panneau a d'autres panneaux ou a des poteaux, l'armature etant enrobee par un bloc de platre cellulaire dont au moins l'une des faces est revetue d'un enduit;

**Machine translation:** (Claim 1) 1. It is sometimes necessary to be able to have cover plates 67, which may be sawn to length as the poles and to be planed on both sides at the request. These plates 67 have a median 68-mesh frame on which molds are two rectangular blocks 69 and 70, cellular plaster, encasing a mid-thickness reinforcement 68. These blocks are separated from each other, so as to define slots 71 and 72 of that same section of the grooves 2 and 3 ABOVE. Various modifications can, moreover be made to embodiments, represented and described in detail without departing from the scope of the invention.

SUMMARY The invention relates to: I. A manufacturing process for the construction of elements, characterized in that at least one layer of mesh is fixed on a support frame, the whole being placed in a holding jig forming machinery and mold for the casting of a block of plaster coating Cell intimately the armature assembly and a coating of plaster the faces of this block, to form the element itself, which is then dried, either in the open air or by ventilation, then hardened by immersion in boiling fluatee, and a new dryer. II. A tool for the implementation of the process, constitutes a support provided with protruding tongues penetrating into the grooves of the frame for the maintenance and, eventually, the conformation of the latter, this tool also comprising, glass plates removable and adjustable in position which form the walls, corresponding to the visible faces of the construction element, also of a mold delimited by the support. III. An element for the construction, 'especially remarkable by the following characteristics, considered separately or in combination: an armature of the element, such as panel, is constituted by a wooden frame covered on both sides, by webs roasting overflowing with this framework to delineate the grooves for the development of male bonding elements of the panel has other signs or poles, the armature being coated with a plaster block cell including at least the one of the faces is coated with a coating;

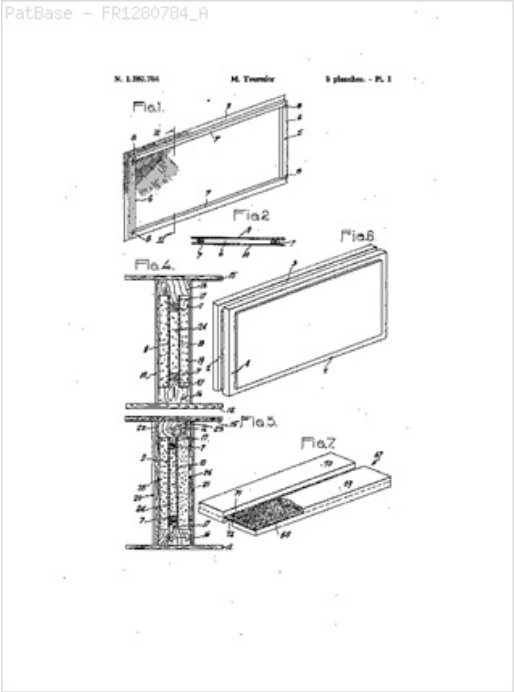
**Classifications:**

**International (IPC 8-9):** E04C2/04 (Advanced/Invention);  
E04C2/04 (Core/Invention)

**International (IPC 1-7):** E04C2/38

**CPC:** E04C2/043

**European:** E04C2/04C



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR1280784 A        | 19620108         | FR19600845046      | 19601125         |

**Priority:**

FR19600845046 19601125

**Inventor(s):** (std): TOURNIER DANIEL

**2) Family number: 21321835 (FR1504398A)**

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**Title:** Maison prefabriquee transportable et de petites dimensions House prefabricated transportable and small (Machine translation)

**Abstract:** Source: FR1504398A [FR] (Claim 1) 1. Elle se presente sous la forme d'un corps parallelepiped, comportant un plancher supporte par des poutres tubulaires qui prennent appui, par l'intermediaire de supports tubulaires verticaux, sur les socles de base enfoncees dans le sol, l'un au moins de ces supports verticaux renfermant un tube vertical d'ecoulement de l'installation sanitaire, tube qui, au moyen d'un raccord, communique avec une fosse septique, les parois de la maison etant formees par des panneaux assembles entre eux par enfourchement grace a des saillies, ou languettes, et des rainures qui presentent des etriers d'extremite, qui embrassent les bords des panneaux pour renforcer les zones d'appui et d'assemblage les plus exposees aux contraintes, ces etriers etant traverses par des boulons et des rivets qui traversent aussi les panneaux, le plafond etant relie aux parois par des poutres tubulaires et des pieces d'angle embrassant les panneaux;

**Machine translation:** (Claim 1) 1. It is provided in the form of a parallelepiped body, having a floor supported by tubular girders which are supported, by means of supports vertical tubular, on the bases basic driven into the ground, at least one of these vertical supports comprising a vertical tube of the flow of WC, which tube, by means of a connection, communicates with a septic tank, the walls of the house are formed by panels assembled together by straddling by projections, or tongues and grooves which exhibit extremity of stirrups, that embrace the edges of the panels to strengthen the support zones and assembling the most exposed to stress, these stirrups being sleepers by bolts and rivets that pass through also panels, the ceiling to the walls being connected by beams and tubular piece of angle embracing the panels;

**Classifications:**

**International (IPC 8-9):** E04B1/00 E04B1/24  
E04B1/343 (Advanced/Invention);

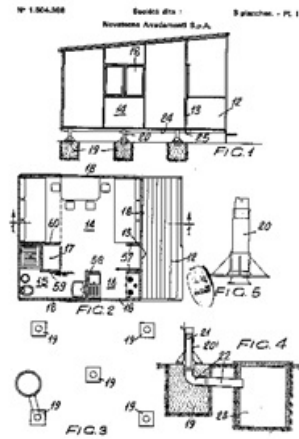
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**International (IPC 1-7):** E04B1/02 E04B1/343 E04H15/04

**CPC:** E04B1/0007 E04B1/24 E04B1/34315 E04B2001/2463

E04B2001/2481 E04B2001/2484

**European:** E04B1/00B E04B1/24 E04B1/343C P04B1/24B52 P04B1/24D  
P04B1/24E

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR1504398 A        | 19671201         | FR19660087410      | 19661214         |

**Priority:**

IT19660007415 19660331

**Probable Assignee:** NOVATECNE ARREDAMENTI S P A**Assignee(s):** (std): NOVATECNE ARREDAMENTI S P A**Inventor(s):** (std): MARIUCCI FILIPPO ; MATTIOLI CARLO ; MATTIOLI GEORGE**3) Family number: 30560682 (US4604843A)**

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**Title:** LOST-FORM CONCRETE FALSEWORK

**Abstract:** A lost form for concrete which comprises insulating slabs of foam material reinforced by a core and held in place in an upright orientation by horizontal base elements, horizontal connecting elements disposed between the tiers of slabs and vertical elements bridging pairs of slabs of each tier. The horizontal elements have a ladder-like configuration with longitudinal members engaging in formations in the lower and upper edges of the slabs and transverse members extending horizontally between and spacing apart the slabs. The vertical elements also have a ladder-like configuration with vertical longitudinal members received in confronting grooves of the slabs and vertically spaced horizontal transverse members which bridge the slabs. The elements are retained in the cast concrete wall and hold the slabs thereagainst.

**Classifications:**

**International (IPC 8-9):** E04B1/16 E04B2/86 E04C5/16 E04G11/06 E04G17/00 E04G9/00 G01B21/04 (Advanced/Invention); E04B1/16 (Advanced/Non-invention); E04B1/16 E04B2/86 E04C5/16 E04G11/00 E04G17/00 G01B21/02 (Core/Invention)

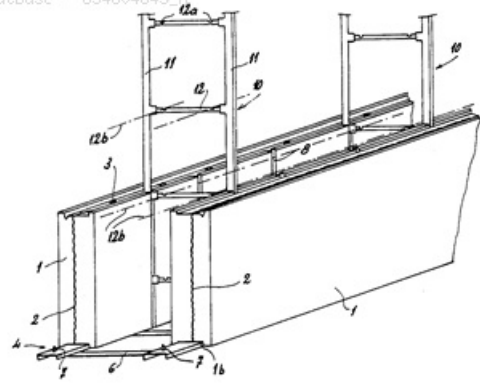
**International (IPC 1-7):** E04B1/00 E04B1/16 E04B2/80 E04B2/86 E04BA E04C5/16 E04G11/06 E04G17/00 E04G9/00 G01B21/04

**CPC:** E04B2/8641 E04B2/8652 E04B2002/867 E04B2002/8676 E04B2/8629 G01B21/04

**European:** E04B2/86F1 E04B2/86G1 E04B2/86J G01B21/04 P04B2/86P P04B2/86Q

**US:** 52/309.12 52/309.9 52/426 52/562

PatBase - US4604843 A

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT37411 E          | 19881015         | AT19840420013T     | 19840131         |
| AU198424245 A1     | 19840816         | AU19840024245      | 19840207         |
| AU571152 B2        | 19880331         | AU19840024245      | 19840207         |
| BRPI8400511 A      | 19840911         | BR1984PI00511      | 19840207         |
| CA1234701 A1       | 19880405         | CA19840446637      | 19840202         |
| DE3474177 D1       | 19881027         | DE19843474177      | 19840131         |

|               |          |               |          |
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| DK164601 B    | 19920720 | DK19840000558 | 19840208 |
| DK164601 C    | 19921214 | DK19840000558 | 19840208 |
| DK55884 A     | 19840809 | DK19840000558 | 19840208 |
| DK55884 A0    | 19840208 | DK19840000558 | 19840208 |
| EP0118374 A2  | 19840912 | EP19840420013 | 19840131 |
| EP0118374 A3  | 19850828 | EP19840420013 | 19840131 |
| EP0118374 B1  | 19880921 | EP19840420013 | 19840131 |
| ES529512 A0   | 19850301 | ES19840529512 | 19840207 |
| ES529512 A2   | 19850321 | ES19840529512 | 19840207 |
| ES8503394 A1  | 19850301 | ES19840529512 | 19840207 |
| FR2521285 A1  | 19830812 | FR19820002166 | 19820210 |
| FR2521285 B1  | 19860328 | FR19820002166 | 19820210 |
| FR2540539 A1  | 19840810 | FR19830002166 | 19830208 |
| FR2540539 B1  | 19850419 | FR19830002166 | 19830208 |
| FR2552472 A2  | 19850329 | FR19830015742 | 19830928 |
| FR2552472 B2  | 19851108 | FR19830015742 | 19830928 |
| GR81756 B     | 19841212 | GR19840173716 | 19840206 |
| IE55045 B     | 19900509 | IE19840000264 | 19840203 |
| IE840264 L    | 19840808 | IE19840000264 | 19840203 |
| IL70879 A0    | 19840531 | IL19840070879 | 19840206 |
| IL70879 A1    | 19871231 | IL19840070879 | 19840206 |
| JP59145847 A2 | 19840821 | JP19840019542 | 19840207 |
| MA20024 A1    | 19841001 | MA19840020246 | 19840201 |
| MX156825 A    | 19881005 | MX19840200261 | 19840202 |
| NO168128 B    | 19911007 | NO19840000453 | 19840207 |
| NO168128 C    | 19920115 | NO19840000453 | 19840207 |
| NO840453 A    | 19840809 | NO19840000453 | 19840207 |
| OA7652 A      | 19850523 | OA19840058225 | 19840207 |
| US4604843 A   | 19860812 | US19840577959 | 19840208 |
| ZA8400953 A   | 19840926 | ZA19840000953 | 19840208 |

#### Priority:

FR19830002166 19830208 FR19820002166 19830208 FR19830015742 19830928  
EP19840420013 19840131 CA19840446637 19840202

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**Assignee(s):** (std): MANURHIN ; ETABLISSEMENTS PATURLE SA ; JALABERT GEORGES E P ; LAURENT RENAUD ; ETABLISSEMENTS PATURLE ; OTT R P L ; PATURLE ETS SA ; OTT RENAUD ; RUNOO PIEERU ROORAN OTO ; RENAUD PIERRE LAURENT OTT ; PATURLE ETS ; SOCIETE ANONYME DITE ETABLISSEMENTS PATURLE ; PATURLE SA ETS ; PIERRE RENAUD

**Assignee(s):** OTT RPL ; OTT RENAUD PL ; VICAT PRODUITS INDUSTRIELS SA ; ETABLISSEMENTS PATURLE ; ANONYME VICAT PRODUITS INDUSTRIELS SOC ; JALABERT GEORGES EP ; ANONYME ETABLISSEMENTS PATURLE SOC ; ANONYME ETS SOC ; ANONYME PATURLE ETS SOC ; ANONYME VICAT PRODUITS IND SOC

**Inventor(s):** (std): GEORGE EMILE PHILIPPE JALABERT ; GEORGES EMILE PHILIPPE JALABER ; GEORGES EMILE PHILIPPE JALABERT ; JALABERT GEORGE EMILE PHILIPPE ; JALABERT GEORGES E P ; JALABERT GEORGES EMILE PHILIPP ; JALABERT GEORGES EMILE PHILIPPE ; JALABERT GEORGES EP ; JEAN PIERRE ROUX ET JEAN CLAUDE SUHR ; JIYORUJIYU ENIRU FUJIRITSUPU JI ; JIYORUJIYU ENIRU FUJIRITSUPU JIYARABERU ; LAURENT OTT ; OTT RENAUD P L ; OTT RENAUD PIERRE LAURENT ; OTT RENAUD PL ; PIERRE RENAUD ; RENAUD LAURENT ; RENAUD OTT ; RENAUD PIERRE ; RENAUD PIERRE LAURENT OTT ; ROUX JEAN PIERRE ; RUNOO PIEERU ROORAN OTO ; SUHR JEAN CLAUDE ; SUHRA JEAN CLAUDE ; OTT LAURENT

**Inventor(s):** OTT RENAUD ; LAURENT RENAUD

**Agent(s):** WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; ROBIC ROBIC AND ASSOCIES ASSOCIATES; AE MULFORD

**Designated states:** AT BE CH DE FR GB IT LI LU NL SE

#### 4) Family number: 5961634 (EP0191709A1)

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**Title:** Method of insulation by cladding.

**Abstract:** Method of insulating the walls and the external facades of houses and other buildings by means of an insulating device. Method characterised in that the said device consists of a plate (2) of insulating material and of a decorative and protective covering panel (3) which are laid individually and kept applied to a support by means of a connection piece, the said connection piece constituting an adjustable double square-angle fitting (40, 50).

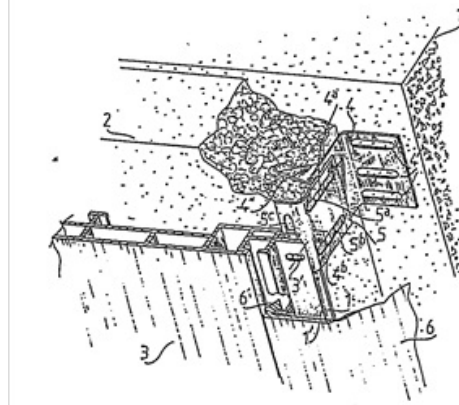
#### Classifications:

**International (IPC 8-9):** E04B1/76 E04F13/08 (Advanced/Invention)

**International (IPC 1-7):** E04B1/76 E04F13/08

**CPC:** E04B1/7612 E04F13/0855

**European:** E04B1/76C1 E04F13/08B3B2

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP0191709 A1       | 19860820         | EP19860440007      | 19860130         |
| FR2576943 A1       | 19860808         | FR19850001536      | 19850201         |
| FR2576943 B1       | 19880617         | FR19850001536      | 19850201         |

**Priority:**

FR19850001536 19850201

**Probable Assignee:**

PIERREL MAURICE

**Assignee(s):** (std):

CUISENIER JEAN PIERRE ; PIERREL MAURICE

**Inventor(s):** (std):

CUISENIER JEAN PIERRE

**Designated states:**

AT BE CH DE GB IT LI LU NL SE

**5) Family number: 29473000 (US4715503A)**

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**Title:** INTERLOCKING JOINT WINE RACK

**Abstract:** A wine rack has no fasteners or adhesives at the three-dimensional joints, but rather the joints are all formed so that the three intersecting cross pieces interlock in such a way that a tight joint construction occurs strictly by virtue of the way the members are cut in the joint region, and the way in which the members are interlocked. The interlocking and connecting of cubic cells provides a rigid structure capable of accepting loads in any direction and allowing the rack to be mounted in any orientation, with single point wall mounting possible wherein the rack can withstand full loading with no distortion. The modular cell configuration is adapted to the construction of lattice beams and other arrangements besides wine racks.

**Classifications:**

**International (IPC 8-9):** A47B47/04 A47B73/00 B29C70/52 B65D6/08 E01D1/00 E04B1/19 E04B1/24 E04B1/58 E04C3/12 E04C3/28 E04C3/42 E04C3/46 E04G1/04 E04H12/02 E04H12/10 E04H12/24 E04H17/14 E06C7/08 F16B12/12 F16B7/04 (Advanced/Invention); E04B1/19 E04B1/24 E04B1/58 E04H12/24 (Advanced/Non-invention); A47B47/00 A47B73/00 B29C70/04 B65D6/00 E01D1/00 E04B1/19 E04B1/24 E04B1/58 E04C3/02 E04C3/12 E04C3/38 E04G1/00 E04H12/00 E04H17/14 E06C7/00 F16B7/04 (Core/Invention); E04B1/19 E04B1/58 (Core/Non-invention)

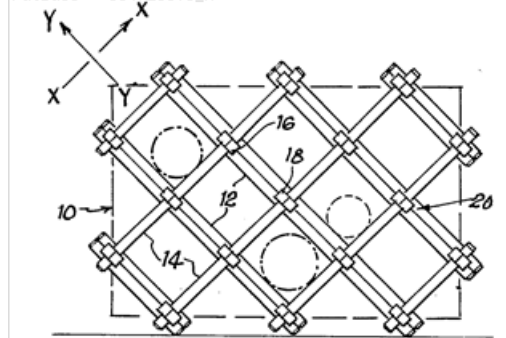
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**CPC:** Y10S52/10 Y10T403/34 Y10T403/342 Y10T403/347 Y10T403/44 Y10T403/46 Y10T403/4694 Y10T403/4602 Y10T403/4671 Y10T403/7001 Y10T403/7096 Y10T156/1008 Y10T156/101 Y10T156/1051 Y10T428/1362 Y10T428/24033 Y10T428/24446 Y10T428/24645 Y10T428/24686 Y10T428/24785 A47B73/00 F16B12/125 A47B73/006 A47B47/04 Y10T403/447 E01D1/00 E01D2101/10 E01D2101/26 E01D2101/30 E01D2101/40 E04B1/19 E04B2001/1927 E04B2001/1945 E04B2001/1948 E04B2001/1963 E04B2001/1975 E04B2001/5893 E04C3/12 E04C3/42 E04G1/04 E04H17/1439 Y10T403/343 B29C70/525 E04B2001/1924 E04B2001/1933 E04B2001/1984 E04B2001/199 E04B2001/1993 E04C3/28 E04H12/02 E04H12/24 E04B2001/1957 E04C3/46 E06C7/08 F16B7/0446

**European:** A47B47/04 A47B73/00 A47B73/00E B29C70/52C E01D1/00 E04B1/19 E04C3/12 E04C3/28 E04C3/42 E04C3/46 E04G1/04 E04H12/02 E04H17/14E2 E06C7/08 F16B12/12M F16B7/04D2 P01D101/10 P01D101/26 P01D101/30 P01D101/40 P04B1/19C P04B1/19C1 P04B1/19C2 P04B1/19C6 P04B1/19C7 P04B1/19D P04B1/19D2 P04B1/19E P04B1/19G2 P04B1/19H P04B1/19K P04B1/58P P04H12/24

**US:** 156/166 156/200 156/201 156/227 156/242 156/245 174/45R 211/189 211/205 211/74 256/22 256/65 256/65.04 264/137 273/160 312/263 362/367 403/169 403/171 403/172 403/176 403/217 403/219 403/230 403/231 403/255 403/263 403/346 403/382 405/262 405/272 428/102 428/152 428/176 428/181 428/193 428/36.1 428/361 446/106 52/282.1 52/309.14 52/309.9 52/592.1 52/600 52/646 52/648 52/648.1 52/650.1 52/651.01 52/651.02 52/651.03 52/651.04 52/651.09 52/655.1 52/697 52/720 52/724 52/728 52/731.3 52/736.2 52/736.3 52/736.4 52/835 52/844 52/849 52/DIG.1 52/DIG.10 526/970 527/280

PatBase - US4715503\_A

**Family:**

| Publication number | Publication date | Application number | Application date |
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| AU199177976 A1     | 19920107         | AU19910077976      | 19910411         |
| AU199336039 A1     | 19930901         | AU19930036039      | 19930201         |
| CA2154341 AA       | 19950720         | CA19932154341      | 19930201         |

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| CA2154341 C  | 20001226 | CA19932154341  | 19930201 |
| EP0742862 A1 | 19961120 | EP19930904804  | 19930201 |
| EP0742862 A4 | 19970226 | EP19930904804  | 19930201 |
| JP8509275 T2 | 19961001 | JP19930513480T | 19930201 |
| US4715503 A  | 19871229 | US19860848573  | 19860407 |
| US4809146 A  | 19890228 | US19870137101  | 19871223 |
| US4825620 A  | 19890502 | US19870137100  | 19871223 |
| US4991726 A  | 19910212 | US19880231379  | 19880812 |
| US5024036 A  | 19910618 | US19900541547  | 19900621 |
| US5197818 A  | 19930330 | US19910715910  | 19910614 |
| US5222344 A  | 19930629 | US19910715908  | 19910614 |
| US5247774 A  | 19930928 | US19910715912  | 19910614 |
| US5285612 A  | 19940215 | US19910696922  | 19910508 |
| US5285613 A  | 19940215 | US19920828499  | 19920131 |
| US5319901 A  | 19940614 | US19930007079  | 19930121 |
| US5597629 A  | 19970128 | US19950325981  | 19950126 |
| US5617692 A  | 19970408 | US19940196650  | 19940214 |
| US5644888 A  | 19970708 | US19940259431  | 19940614 |
| US5749198 A  | 19980512 | US19930128800  | 19930928 |
| US5795424 A  | 19980818 | US19970806031  | 19970126 |
| US6286281 BA | 20010911 | US19990311338  | 19990513 |
| WO9119871 A1 | 19911226 | WO1991US02434  | 19910411 |
| WO9315292 A1 | 19930805 | WO1993US00888  | 19930201 |

#### Priority:

|               |          |               |          |               |          |
|---------------|----------|---------------|----------|---------------|----------|
| US19860848573 | 19860407 | US19870137100 | 19871223 | US19870137101 | 19871223 |
| US19880231379 | 19880812 | US19900541547 | 19900621 | WO1991US02434 | 19910411 |
| US19910696922 | 19910508 | US19910715910 | 19910614 | US19910715908 | 19910614 |
| US19910715912 | 19910614 | US19910541547 | 19910621 | US19920828499 | 19920131 |
| US19930007079 | 19930121 | WO1993US00888 | 19930201 | US19930128800 | 19930928 |
| US19940196650 | 19940214 | US19940259431 | 19940614 | US19950325981 | 19950126 |
| US19970806031 | 19970126 | US19970881974 | 19970625 | US19990311338 | 19990513 |

**Probable Assignee:** EBERT COMPOSITES CORP

**Assignee(s):** (std): EBERT COMPOSITES CORP ; GEORGE KORZENIOWSKI ; GOLDSWORTHY W BRANDT ; KORZENIOWSKY GEORGE ; JOHNSON DAVID W ; KORZENIOWSKI GEORGE ; BRANDT GOLDSWORTHY W

**Assignee(s):** DAVID W JOHNSON ; EBERT COMPOSITES A CORP OF CA CORP ; GOLDSWORTHY W

**Inventor(s):** (std): KORZENIOWSKY GEORGE ; KORZENIOWSKI GEORGE ; JOHNSON DAVID W ; GOLDSWORTHY W BRANDT

**Inventor(s):** GEORGE KORZENIOWSKI ; DAVID W JOHNSON ; GOLDSWORTHY W ; W BRANDT GOLDSWORTHY

**Agent(s):** PATENT ATTORNEY SERVICES; BULL HOUSSEY AND TUPPER LLP

**Designated states:** AT AU BB BE BF BG BJ BR CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KR KP LK LU MC MG ML MN MR MW NL NO NZ PL PT RO RU SD SE SK SN TD TG UA US

#### 6) Family number: 9440588 (US5481842A)

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**Title:** LINKING AND ASSEMBLY BLOCK FOR PROFILED BARS AND ASSEMBLY OF BARS APPLYING IT

**Abstract:** An assembly block and system for connecting a plurality of bars. The block has a cross-section which is the same size as the cross section of the bars. A plurality of holes are formed in the block and cutouts extend from the holes to sides of the block. The bars can be coupled in various configurations by screws which extend through the holes formed in the block. The block does not extend outside of the dimensions of the bar in cross-section.

#### Classifications:

**International (IPC 8-9):** E04B2/76 F16B7/18 (Advanced/Invention);

E04B2/76 F16B7/18 (Core/Invention)

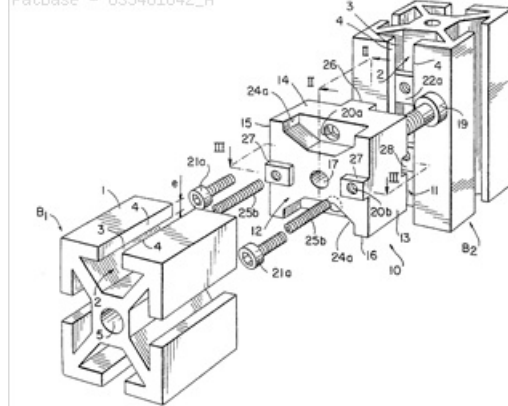
**International (IPC 1-7):** E04B2/76 E04C3/00 F16B7/00 F16B7/04

**CPC:** Y10T403/4602 Y10T403/4681 Y10T403/4685 F16B7/187 E04B2/76

**European:** E04B2/76 F16B7/18N

**US:** 403/231 403/258 403/260 52/656.9 52/710 52/726.1 52/848

PatBase - US5481842\_A



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE69308642 D1      | 19970417         | DE19936008642      | 19930602         |
| DE69308642 T2      | 19971002         | DE19936008642T     | 19930602         |
| EP0573355 A1       | 19931208         | EP19930401410      | 19930602         |
| EP0573355 B1       | 19970312         | EP19930401410      | 19930602         |
| FR2692010 A1       | 19931210         | FR19920006941      | 19920603         |

|              |          |               |          |
|--------------|----------|---------------|----------|
| FR2692010 B1 | 19960209 | FR19920006941 | 19920603 |
| US5481842 A  | 19960109 | US19930070530 | 19930603 |

**Priority:**

FR19920006941 19920603

**Probable Assignee:** ADL AUTOMATION

**Assignee(s):** (std): ADL AUTOMATION ; GAUTREAU ANDRE ; GAUTREAU ANDRE BERNARD J ; GAUTREAU ANDRE BERNARD JACQUES

**Assignee(s):** GAUTREAU ANDRE BERNARD J FIGEAC FR

**Inventor(s):** (std): ANDRE GAUTREAU ; BERNARD ; GAUTREAU ANDRE ; GAUTREAU ANDRE BERNARD J ; GAUTREAU ANDRE BERNARD JACQUES ; JACQUES

**Inventor(s):** GAUTREAU ANDRE BERNARD J FIGEAC FR

**Designated states:** CH DE ES FR IT LI

**7) Family number: 14928714** (US2003097203A)

© PatBase

**Title:** PROGRAMMABLE MATERIALS

**Abstract:** Programmable material is a collection of substantially cubic shaped bricks called monomers that move relative to each other under computer control to sculpt engineering structures (5) and mechanisms (6) (walking machine) illustrated in the figure. The monomers have features to lock to other monomers and slide relative to other monomers without separating. The monomers are fault tolerant against damage; functional monomers move faulty monomers and replace them with functioning clones. Movement of monomers is broken down systematically into streamers, gateways, highways and reservoir methods to obtain individual monomer movement paths required to synthesise a structure. Specialised monomers can carry tools which together with synthesis of custom structures create custom machines.

**Classifications:**

**International (IPC 8-9):** A63H33/04 B23P21/00 B25J5/00 B25J9/10 E04B1/343 (Advanced/Invention);

B25J5/00 B25J9/10 (Advanced/Non-invention)

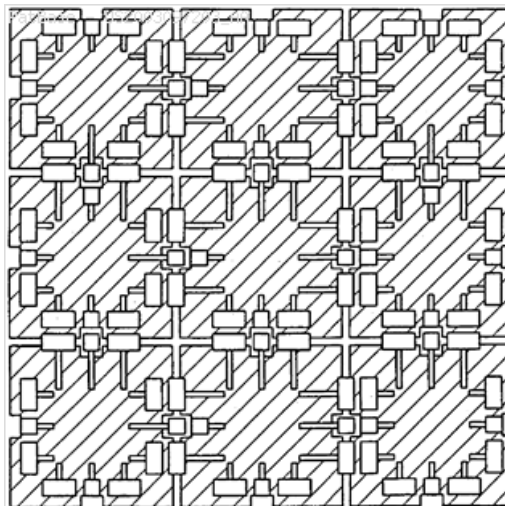
**International (IPC 1-7):** B23P21/00 B25J5/00 B25J9/10 B25J9/16

E04B1/35 E04C1/00 G05B19/04 G05B19/18

**CPC:** A63H33/042 E04B1/34331

**European:** A63H33/04B E04B1/343C3

**US:** 180/8.6 700/247 700/247P 700/248 901/6



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT194538 E         | 20000715         | AT19950909905T     | 19950303         |
| AU199518205 A1     | 19950918         | AU19950018205      | 19950303         |
| CN1046653 C        | 19991124         | CN19951091924      | 19950303         |
| CN1143342 A        | 19970219         | CN19951091924      | 19950303         |
| DE69517961 D1      | 20000817         | DE19956017961      | 19950303         |
| DE69517961 T2      | 20010222         | DE19956017961T     | 19950303         |
| DK0748270 T3       | 20001106         | DK19950909905T     | 19950303         |
| EP0748270 A1       | 19961218         | EP19950909905      | 19950303         |
| EP0748270 B1       | 20000712         | EP19950909905      | 19950303         |
| ES2149970 T3       | 20001116         | ES19950909905T     | 19950303         |
| GB2287045 A1       | 19950906         | GB19940004227      | 19940304         |
| GB2287045 B2       | 19970514         | GB19940004227      | 19940304         |
| GB9404227 A0       | 19940420         | GB19940004227      | 19940304         |
| GR3034606 T3       | 20010131         | GR20000402290T     | 20001012         |
| IN188215 A         | 20020831         | IN1995MA00178      | 19950215         |
| JP9511453 T2       | 19971118         | JP19950522778T     | 19950303         |
| PT748270 T         | 20010131         | PT19950909905T     | 19950303         |
| TW334378 B         | 19980621         | TW19950101842      | 19950228         |
| US2003097203 AA    | 20030522         | US20030335733      | 20030102         |
| US6157872 A        | 20001205         | US19960727557      | 19961211         |
| US6546315 BA       | 20030408         | US20000685176      | 20001010         |
| WO9523676 A1       | 19950908         | WO1995GB00460      | 19950303         |

**Priority:**

GB19940004227 19940304

WO1995GB00460 19950303

US19960727557 19961211

US20000685176 20001010

US20030335733 20030102

**Probable Assignee:** JOSEPH MICHAEL

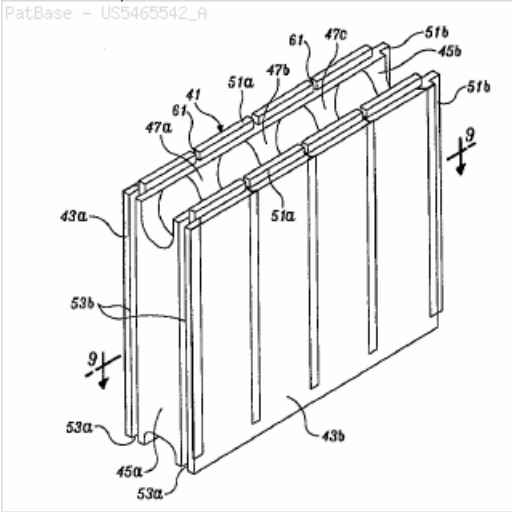
**Assignee(s):** (std): JOSEPH MICHAEL ; MICHAEL JOSEPH  
**Inventor(s):** (std): JOSEPH MICHAEL ; MICHAEL JOSEPH  
**Designated states:** AM AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CZ DE DK EE ES FI FR GA GB GE GN GR HU IE IT JP KE KG KP KR KZ LI LK LR LT LU LV MC MD MG ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TT UA UG US UZ VN

**8) Family number: 12237053 (US5465542A)** © PatBase

**Title:** Interlocking concrete form modules

**Abstract:** Interlocking concrete form modules (21) suitable for creating a concrete wall form is disclosed. The modules (21) have the general shape of a right rectangular parallelepiped with parallel side walls (23a, 23b) joined by integral webs (25a, 25b, 27a, 27b, 27c) that define a plurality of parallel elongate cavities (31). The edges of the side walls (23a, 23b) include tongues (33a, 33b) and grooves (35a, 35b) that allow the modules (21) to be interlocked to form a wall. The ends of the webs are undercut such that cavities between the modules are created when the modules are suitably interlocked. The between-the-module cavities lie orthogonal to the through-the-module cavities. The modules (21) are formed of an insulating material and left in place. Preferably, the tongues along one edge include notches aligned with the webs. In one embodiment, the modules (21) substantially entirely are formed of relatively dense (3-5 lb./ft.3) expanded polystyrene (EPS). The density of the EPS is adequate to hold threaded wall anchors. In an alternate embodiment, the modules (41) are formed of less dense (approximately 1.5 lb./ft.3) EPS and include embedded nonmetallic attachment elements (55, 57) that are sized and positioned such that surfaces of the attachment elements lie coplanar with the outer surfaces of the side walls (43a, 43b) of the modules (41). Preferably, the nonmetallic attachment elements (55, 57) span substantially the entire height of the modules to create equi-spaced furring strips that cover substantially the entire height of a wall formed when the modules are suitably assembled.

**Classifications:**  
**International (IPC 8-9):** E04B2/26 E04B2/86 E04C 1/40 (Advanced/Invention); E04B2/02 (Advanced/Non-invention); E04B2/14 E04B2/86 E04C 1/00 (Core/Invention); E04B2/02 (Core/Non-invention)  
**International (IPC 1-7):** E04B2/34  
**CPC:** E04B2/26 E04B2/8629 E04B2/8652 E04B2002/0206 E04B2002/0208 E04B2002/0226 E04B2002/867 E04C 1/40  
**European:** E04B2/26 E04B2/86F1 E04B2/86J E04C 1/40 P04B2/02M1A P04B2/02M1B P04B2/02M1F P04B2/86P  
**US:** 52/309.12 52/309.16 52/309.7 52/376 52/431 523/97 D25/118



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| ■ US5465542 A      | 19951114         | US19930171242      | 19931220         |

**Priority:**

US19920891558 19920529 US19930171242 19931220

**Probable Assignee:** ADVANCED BUILDING TECHNOLOGIES LLC

**Assignee(s):** (std): TERRY VERL O

**Assignee(s):** ADVANCED BUILDING TECHNOLOGIES LLC ; ADVANCED BUILDING TECHNOLOGIES LLC PMB

**Inventor(s):** (std): TERRY VERL O

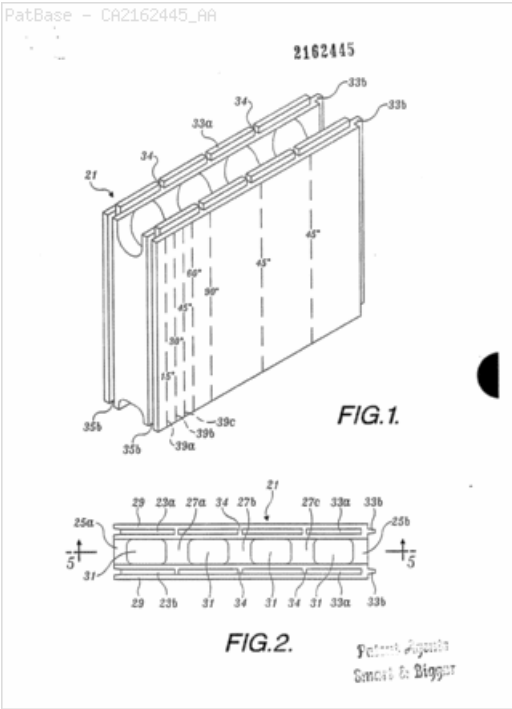
**9) Family number: 9531804 (CA2162445A)** © PatBase

**Title:** INTERLOCKING CONCRETE FORM MODULES

**Abstract:** Interlocking concrete form modules (21) suitable for creating a concrete wall form is disclosed. The modules (21) have the general shape of a right rectangular parallelepiped with parallel side walls (23a, 23b) joined by integral webs (25a, 25b, 27a, 27b, 27c) that define a plurality of parallel elongate cavities (31). The edges of the side walls (23a, 23b) include tongues (33a, 33b) and grooves (35a, 35b) that allow the modules (21) to be interlocked to form a wall. The ends of the webs are undercut such that cavities between the modules are created when the modules are suitably interlocked. The between-the-module cavities lie orthogonal to the through-the-module cavities. The modules (21) are formed of an insulating material and left in place. Preferably, the tongues along one edge include notches aligned with the webs. In one embodiment, the modules (21) substantially entirely are formed of relatively dense (3-5 lb./ft.3) expanded polystyrene (EPS). The density of the EPS is adequate to hold threaded wall anchors. In an alternate embodiment, the modules (41) are formed of less dense (approximately 1.5 lb./ft.3) EPS and include embedded nonmetallic attachment elements (55, 57) that are sized and positioned such that surfaces of the attachment elements lie coplanar with the outer surfaces of the side walls (43a, 43b) of the modules (41). Preferably, the nonmetallic attachment elements (55, 57) span substantially the entire height of the modules to create equi-spaced furring strips that cover substantially the entire height of a wall formed when the modules are suitably assembled.

**Classifications:**  
**International (IPC 8-9):** E04B2/86 E04C 1/40 E04C2/04 E04G11/00 E04G11/18 (Advanced/Invention); E04B2/02 (Advanced/Non-invention); E04B2/86 E04C 1/00 E04G11/00 (Core/Invention);

E04B2/02 (Core/Non-invention)  
**International (IPC 1-7):** E04C2/04 E04G11/00  
**CPC:** E04B2/8629 E04B2/8652 E04B2002/0206 E04B2002/0208  
E04B2002/0228 E04B2002/867 E04C 1/40 E04G11/18  
**European:** E04B2/86F1 E04B2/86J E04C1/40 E04G11/18 P04B2/02M1A  
P04B2/02M1B P04B2/02M1G P04B2/86P



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CA2162445 AA       | 19970509         | CA19952162445      | 19951108         |

**Priority:**

CA19952162445 19951108

**Probable Assignee:** TERRY VERL O  
**Assignee(s): (std):** TERRY VERL O  
**Inventor(s): (std):** TERRY VERL O  
**Agent(s):** SMART AND BIGGAR

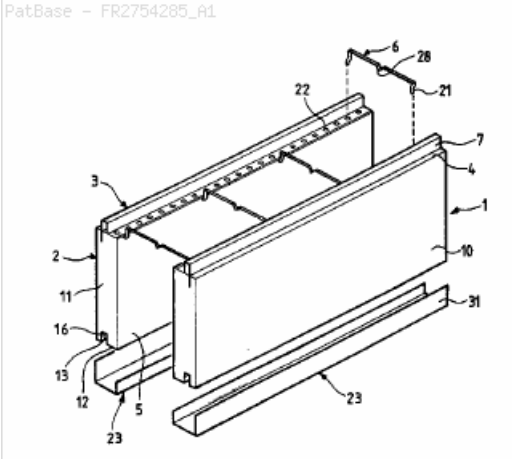
**10) Family number: 14257408 (FR2754285A)**

© PatBase

**Title:** Concrete wall coffering element

**Abstract:** The insulated coffering element (1) is assembled with identical elements to form a permanent modular coffering for poured concrete walls. The element is constituted by a thermally insulated panel (2) on the upper edge (4) of which is fixed a connecting section (3) having a tenon (7). On the panel lower edge (13) is a longitudinal groove (13) forming a mortise. This enables the fitting of the panel lower edge into the upper edge of an adjacent element. The tenon and mortise occupy coplanar positions set back relative to the plane passing longitudinally through the panel centre parallel to the internal face (5). The length of the tenon and mortise correspond to half the panel thickness. The connecting section has two perpendicular anchoring legs which are immobilised in the panel upper part. The legs are in the respective extensions of two orthogonal faces of the tenon.

**Classifications:**  
**International (IPC 8-9):** E04B1/16 E04B2/86 (Advanced/Invention);  
E04B1/16 E04B2/86 (Core/Invention)  
**International (IPC 1-7):** E04B2/86 E04G17/00  
**CPC:** E04B1/161 E04B2/8652 E04B2002/8688  
**European:** E04B1/16A E04B2/86J P04B2/86S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR2754285 A1       | 19980410         | FR19960012280      | 19961003         |

**Priority:**

**Probable Assignee:** KTBAT  
**Assignee(s):** (std): KTBAT  
**Inventor(s):** (std): BLOCH ALAIN ; MARSAUT DOMINIQUE

**11) Family number: 18160299** (WO9838396A1)

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**Title:** TRANSPARENT PLASTIC BUILDING BLOCK

**Abstract:** The invention relates to a polygonal, especially rectangular, parallelepiped building block made from transparent plastic and configured from two hollow halves (1) with facing parallel lateral edges. Coupling elements (3, 4, 5, 6) extend substantially perpendicularly from the peripheral flanges (1'') of said parts to connect the building block with adjacent blocks and the coupling elements on the opposite faces of any two structural members are interlockable. One attachment (3 or 5) with a groove (3' or 5') preferably open towards the visible surface (1') and running parallel with the visible surface edge and one attachment (4' or 6') with a nose preferably remote from the visible surface (1') and running parallel to the visible surface edge are provided as coupling elements at a mutual distance on each peripheral flange of each half-block. Said attachments (5, 6) are elastically deformable on two mutually facing sides of the building block and adjacent blocks can be engaged with a positive and non-positive fit by inserting the noses (6') into the grooves (5') on a narrow side of the block in the direction of the course of the groove on one side and by interlocking of the noses (4') and grooves (3') on the adjacent narrow side at the front.

**Classifications:**

**International (IPC 8-9):** E04C 1/42 (Advanced/Invention);

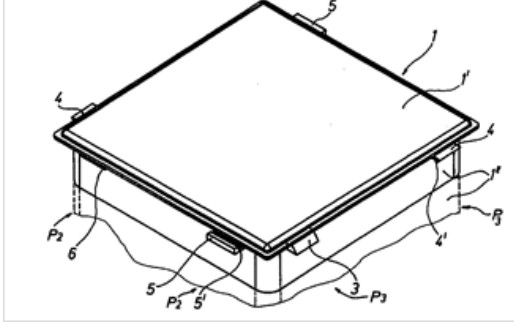
E04C 1/00 (Core/Invention)

**International (IPC 1-7):** E04C 1/42

**CPC:** E04C 1/42

**European:** E04C 1/42

PatBase - WO9838396\_A1



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT205909 E         | 20011015         | AT19980901869T     | 19980217         |
| DE59801521 D1      | 20011025         | DE19985001521      | 19980217         |
| EP0963493 A1       | 19991215         | EP19980901869      | 19980217         |
| EP0963493 B1       | 20010919         | EP19980901869      | 19980217         |
| ES2165144 T3       | 20020301         | ES19980901869T     | 19980217         |
| WO9838396 A1       | 19980903         | WO1998AT00032      | 19980217         |

**Priority:**

AT19970000298 19970224 WO1998AT00032 19980217

**Probable Assignee:** PLASTBLOC S R L

**Assignee(s):** (std): P M KIRSCHNER GES MBH ; PLASTBLOC S R L

**Assignee(s):** PLASTBLOC S R L PRESEZZO

**Inventor(s):** (std): KIRSCHNER PETER

**Designated states:** AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

**12) Family number: 29463009** (US5993283A)

© PatBase

**Title:** Modular buildings for a toy building set

**Abstract:** A modular building for a toy building set includes a planar member, or foundation, having raised ribs on its top and a wall member having a wall portion and a base portion. The wall portion of the wall member is substantially orthogonal to the base portion of the wall member. The base portion of the wall member has a cleft therein sized to receive one of the ribs of the foundation to removably attach the wall member to the foundations. A substantially planar coupler connects at least two or more of the foundation. The coupler has at least two clefts therein. The clefts are sized to receive the ribs on each of the two foundations for removable attachment of the foundation to the coupler.

**Classifications:**

**International (IPC 8-9):** A63H33/04 A63H33/06 A63H33/08 A63H33/10

A63H33/42 G09B25/04 G09B25/08 (Advanced/Invention)

**International (IPC 1-7):** A63H33/06 A63H33/08 A63H33/10 E04B2/00

G09B25/08

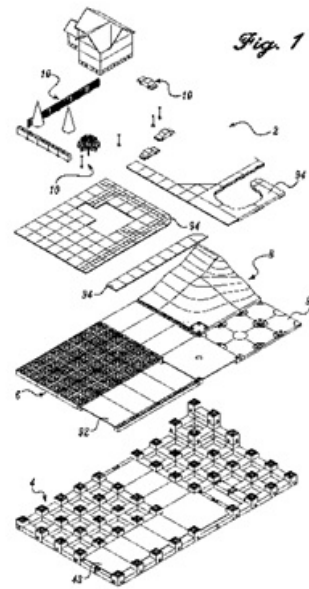
**CPC:** A63H33/04 A63H33/044 A63H33/086 A63H33/10 A63H33/42

G09B25/04

**European:** A63H33/04 A63H33/04H A63H33/08L A63H33/10 A63H33/42

G09B25/04

**US:** 446/108 446/115 446/124 446/127 52/586.2

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT280626 E         | 20041115         | AT19980944636T     | 19980831         |
| AT300985 E         | 20050815         | AT19980009641T     | 19980831         |
| AT300986 E         | 20050815         | AT19980009642T     | 19980831         |
| DE69827289 D1      | 20041202         | DE19986027289T     | 19980831         |
| DE69827289 T2      | 20060302         | DE19986027289T     | 19980831         |
| DE69831103 D1      | 20050908         | DE19986031103T     | 19980831         |
| DE69831103 T2      | 20060524         | DE19986031103T     | 19980831         |
| DE69831104 D1      | 20050908         | DE19986031104T     | 19980831         |
| DE69831104 T2      | 20060420         | DE19986031104T     | 19980831         |
| EP1027117 A1       | 20000816         | EP19980944636      | 19980831         |
| EP1027117 A4       | 20001227         | EP19980944636      | 19980831         |
| EP1027117 B1       | 20041027         | EP19980944636      | 19980831         |
| EP1459790 A1       | 20040922         | EP20040009641      | 19980831         |
| EP1459790 B1       | 20050803         | EP20040009641      | 19980831         |
| EP1459791 A1       | 20040922         | EP20040009642      | 19980831         |
| EP1459791 B1       | 20050803         | EP20040009642      | 19980831         |
| EP1459792 A1       | 20040922         | EP20040009643      | 19980831         |
| US5993283 A        | 19991130         | US19970940618      | 19970930         |
| WO9916525 A1       | 19990408         | WO1998US18078      | 19980831         |

**Priority:**

US19970940618 19970930      EP19980944636 19980831      WO1998US18078 19980831

**Probable Assignee:** PARVIA CORP

**Assignee(s):** (std): PARVIA CORP

**Assignee(s):** PARVIA CORP SEATTLE

**Inventor(s):** (std): BRADY CHRIS ; CRYAN SEAN ; CYRUS PETER ; FRANKO RICH ; FRANZ GARY ; GIBSON MATT ; PROCTOR STEVE ; WICKLANDER DAVID ; PROCTER STEVE

**Designated states:** AT BE CA CH CY DE DK ES FI FR GB GR IE IT JP LI LU MC NL PT SE

**13) Family number: 14951952 (US6178711B)**

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**Title:** Compactly-shipped site-assembled concrete forms for producing variable-width insulated-sidewall fastener-receiving building walls

**Abstract:** Generally large, typically eight feet by two inches by ten or sixteen or twenty-four inches, sidewalls for modular concrete forms are easily, efficiently and economically produced by cutting and by routing sheet-type polymeric material, preferably polyurethane or expanded polystyrene foam. Metal connecting members are produced in standard sizes by cutting and bending sheet steel and/or wire. The sidewalls and connecting members are transported to a building site tightly and compactly in pieces, and then flexibly assembled into precision wall forms at the site with good efficiency at any scale. The wall forms so assembled define a cavity into which reinforcing steel rod, electrical and/or communications conduit, plumbing, etc., may be entered. Concrete is poured into the cavity to create a wall having the form sidewalls as its permanent surfaces. These surfaces have and present visible, regularly-spaced sheet steel strips suitable to receive and to engage sheet metal screws for mounting

anything, including more sheet-type construction materials such as wallboard or paneling, to the wall. The thickness of the concrete wall is predetermined by the dimensions of its metal sidewall-connecting members, and may easily be varied such as during the fabrication of lower to upper wall courses of a multi-story building.

**Classifications:**

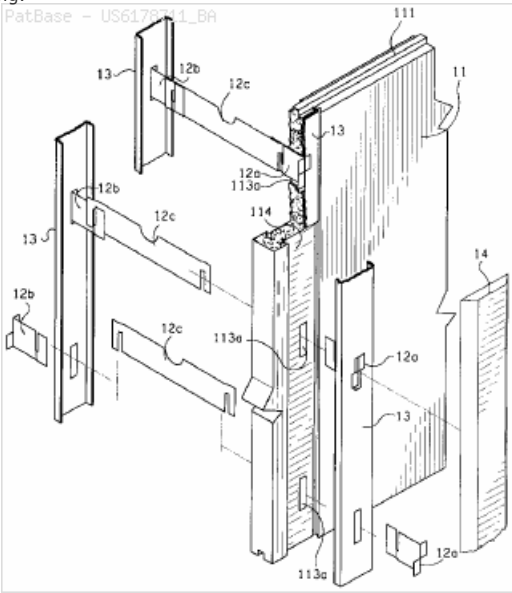
**International (IPC 8-9):** E04B2/86 E04C1/39 (Advanced/Invention);  
E04B2/02 (Advanced/Non-invention);  
E04B2/86 E04C1/00 (Core/Invention);  
E04B2/02 (Core/Non-invention)

**International (IPC 1-7):** E04B2/34

**CPC:** E04B2/8635 E04B2/8647 E04B2002/026 E04C1/395

**European:** E04B2/86G E04B2/86H E04C1/39B P04B2/02N2

**US:** 52/357 52/358 52/363 52/379 52/424 52/427 52/570 524/270



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US6178711 BA       | 20010130         | US19960739725      | 19961107         |

**Priority:**

US19960739725 19961107

**Probable Assignee:**

LAIRD ALEX

**Assignee(s):**

LAIRD ALEX ; LAIRD ANDREW

**Inventor(s): (std):**

LAIRD ALEX ; LAIRD ANDREW

**14) Family number: 28179745 (US2002000071A)**

© PatBase

**Title:** Modular tenon and slot mortise building blocks for habitable shelters

**Abstract:** Modular tenon and slot mortise building blocks include, for each building block: (a) hollow rectangular parallelepiped center block, (b) an outer siding member, (c) a first tenon member sandwiched between the center block and the siding member, (d) an inner facing member, and (e) a second tenon member sandwiched between the center block and the facing member. The tenon members are parallel and mounted to longitudinal sides of the center block. The tenon members are positioned and of a length so as to extend longitudinally of a first end of the center block by a first distance and so as to form mortised first and second recesses having a first depth behind the first and second tenon members, respectively, between the siding member and the center block and between the facing member and the center block. The first distance is substantially equal to the first depth.

**Classifications:**

**International (IPC 8-9):** E04B2/16 E04B2/22 E04C1/00  
E04C2/36 (Advanced/Invention);  
E04B2/02 (Advanced/Non-invention)

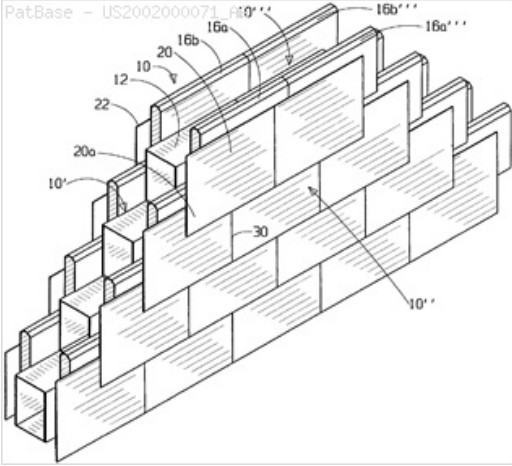
**International (IPC 1-7):** E04B1/16 E04B2/00 E04B2/42 E04C1/00

**CPC:** E04B2/16 E04B2/22 E04B2002/0208 E04B2002/0228

E04B2002/0265 E04C2/365

**European:** E04B2/16 E04B2/22 E04C2/36B P04B2/02M1B P04B2/02M1G  
P04B2/02N4

**US:** 405/284 405/286 446/125 52/381 52/381S 52/404.3 52/404.300S  
52/404.4 52/404.400S 52/405.2 52/421 52/422 52/425 52/425S 52/426  
52/426P 52/503 52/505 52/592.6 52/788.1 52/788.100S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CA2351927 AA       | 20020103         | CA20012351927      | 20010629         |
| US2002000071 AA    | 20020103         | US20010898718      | 20010702         |
| US6508038 BB       | 20030121         | US20010898718      | 20010702         |

**Priority:**

US20000216151P 20000703

CA20012351927 20010629

US20010898718 20010702

**Probable Assignee:** AL GHITTA ALI KASHIF  
**Assignee(s):** (std): AL GHITTA ALI KASHIF  
**Inventor(s):** (std): AL GHITTA ALI KASHIF  
**Agent(s):** EDWARDS ANTONY C

**15) Family number: 28323300** (US2002148187A)

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**Title:** Construction blocks and structures therefrom

**Abstract:** Provided herein are blocks useful in the construction of walls and other structures. The blocks include in their design features which render them to be interlocking, and which provide for a wall constructed from the blocks to include a plurality of horizontal and vertical channels that are adapted to receive reinforcing rods ("rebar"). Once a two-dimensional network of rebar is disposed in the interior of such a wall constructed from blocks according to a preferred form of the invention, a castable concrete may be poured into the wall and caused to exist in the spaces between the rebar and the blocks of the invention. By such construction, a wall comprising concrete in its interior that is reinforced in two dimensions is provided, wherein reinforcement in the third dimension is provided by the interlocking feature of the tops and bottom portions of blocks in adjacent rows with one another.

**Classifications:**

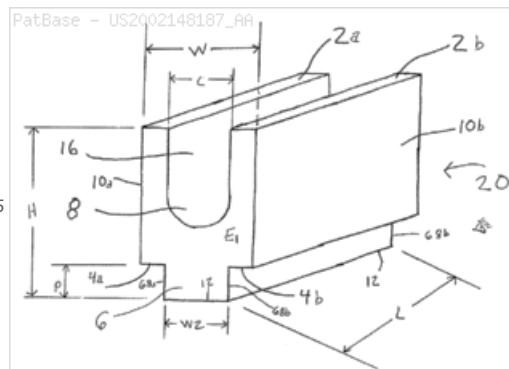
**International (IPC 8-9):** E04B2/14 E04B2/26 (Advanced/Invention);  
E04B2/02 (Advanced/Non-invention);  
E04B2/14 (Core/Invention);  
E04B2/02 (Core/Non-invention)

**International (IPC 1-7):** E04B2/00 E04B2/08 E04B2/20 E04B2/56  
E04C1/00

**CPC:** E04B2/14 E04B2/26 E04B2002/0206

**European:** E04B2/14 E04B2/26 P04B2/02M1A

**US:** 52/286 52/309.12 52/309.7 52/570 52/589.1 52/592.6 52/604 52/605  
52/606 52/607 52/612 52/640



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2002148187 AA    | 20021017         | US20010835969      | 20010417         |
| US6588168 BB       | 20030708         | US20010835969      | 20010417         |

**Priority:**

US20010835969 20010417

**Probable Assignee:** WALTERS DONALD L  
**Assignee(s):** (std): WALTERS DONALD L  
**Inventor(s):** (std): WALTERS DONALD L

**16) Family number: 28086708** (US2003033776A)

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**Title:** Corner form for modular insulating concrete form system

**Abstract:** A corner form for an insulating concrete form system. The corner form has two spaced apart insulating panels connected by a plurality of webs. Each insulating panel comprises a short leg of length of eighteen inches and a long leg of thirty inches forming an obtuse angle at their respective intersections. The insulating panels have projections formed in the upper surface thereof and corresponding, vertically aligned notches formed in the lower surface. The projections and notches receivingly cooperate with one another so that stacked corner forms can interlock with one another. The projections and notches accommodate alternating orientation of long and short legs to enable alternating overlapping connection of forms of succeeding courses. The exterior insulating panel of the corner form optionally includes a plurality of vertical reinforcing brackets each having perpendicularly arranged plates extending the full height of the corner form. These plates are spaced apart twelve inches on centers, and each plate adjacent to the corner is spaced apart twelve inches from the corner.

**Classifications:**

**International (IPC 8-9):** E04B2/86 (Advanced/Invention);  
E04B2/86 (Core/Invention)

**International (IPC 1-7):** E04B1/02 E04B2/00 E04B5/04 E04C1/00  
E04C2/04 E04G23/00

**CPC:** E04B2/8617 E04B2002/867 E04B2002/8676

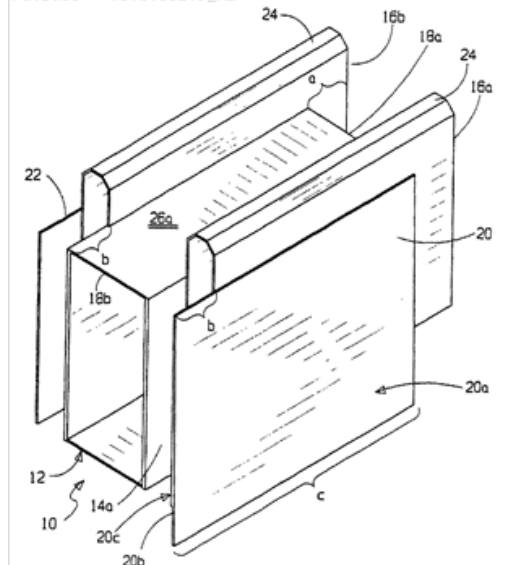
**European:** E04B2/86E1 P04B2/86P P04B2/86Q

**US:** 52/276 52/279 52/309.11 52/309.12 52/309.15 52/309.16 52/309.17  
52/415 52/415P 52/424 52/425 52/426 52/428 52/431 52/438 52/442  
52/562 52/565 52/610 52/741.13 52/4250 52/4260 52/5620

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2003033776 AA    | 20030220         | US20010932095      | 20010820         |
| US2003033781 AA    | 20030220         | US20010932081      | 20010820         |
| US2003033782 AA    | 20030220         | US20010932096      | 20010820         |
| US2004159061 AA    | 20040819         | US20040778225      | 20040217         |
| US6691481 BB       | 20040217         | US20010932095      | 20010820         |
| US6886303 BB       | 20050503         | US20010932096      | 20010820         |
| US6922962 BB       | 20050802         | US20010932081      | 20010820         |

|                           |                            |
|---------------------------|----------------------------|
| <b>Probable Assignee:</b> | SCHMIDT DONALD L           |
| <b>Assignee(s):</b> (std) | SCHMIDT DONALD L           |
| <b>Inventor(s):</b> (std) | SCHMIDT DONALD L           |
| <b>Agent(s):</b>          | SIEMENS PATENT SERVICES LC |

**European:** E04B2/16 P04B2/02M1B P04B2/02M1G

**Family:**

| Publication number                                  | Publication date | Application number | Application date |
|-----------------------------------------------------|------------------|--------------------|------------------|
| <span style="color: red;">■</span> AU2002218918 AA  | 20030715         | AU20020218918      | 20020102         |
| <span style="color: green;">■</span> EA200501072 A1 | 20051229         | EA20050001072      | 20020102         |
| <span style="color: red;">■</span> EP1470300 A1     | 20041027         | EP20020805718      | 20020102         |
| <span style="color: red;">■</span> WO03056109 A1    | 20030710         | WO2002CA00001      | 20020102         |

**Priority:**

WO2002CA00001 20020102

**Probable Assignee:** AL GHITTA ALI KASHIF**Assignee(s):** (std): AL GHITTA ALI KASHIF**Inventor(s):** (std): AL GHITTA ALI KASHIF**Inventor(s):** ALI KASHIF AL GHITTA

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

**18) Family number: 31450854** (US2005028458A)

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**Title:** INTEGRATED WINDOW SASH WITH LATTICE FRAME AND RETAINER CLIP

**Abstract:** An insulating unit includes a first and a second sheet, each of the sheets having a first major surface and an opposite second major surface; an arrangement to position the first and second sheets in spaced relation to one another to provide a compartment between the sheets, the second major surface of the first sheet and the first major surface of the second sheet facing the compartment; a lattice made of muntin bars in the compartment, the lattice having end portions adjacent to and spaced from the arrangement; and a retainer clip having a first end portion connected to an end portion of the lattice and the opposite second end portion having a compressible base, the compressible base in surface contact with the second major surface of the first sheet and the first major surface of the second sheet to retain the lattice in position between the sheets.

**Classifications:****International (IPC 8-9):** B21D53/00 C03C27/00 E04C2/38 E04C2/54

E04C5/16 E04G21/00 E04G23/00 E06B1/00 E06B3/00 E06B3/24

E06B3/28 E06B3/54 E06B3/56 E06B3/66 E06B3/67 E06B3/673

E06B3/677 E06B3/70 E06B3/964 E06B5/00 E06B7/00

E06B9/01 (Advanced/Invention);

E06B3/663 E06B3/667 E06B3/677 E06B3/96 (Advanced/Non-invention);

B21D53/00 E04C5/16 E06B3/04 E06B3/54 E06B3/66

E06B5/00 (Core/Invention);

E06B3/96 (Core/Non-invention);

E06B (Subclass/Invention)

**International (IPC 1-7):** E04B1/00 E05D13/00 E05D15/06 E05D15/16

E06B0/00 E06B3/00 E06B3/24 E06B3/54 E06B3/56 E06B3/64 E06B3/66

E06B3/677 E06B7/12

**CPC:** E06B3/96 Y10T156/1744 Y10T29/49798 E06B3/30 E06B3/24

E06B3/5481 E06B3/56 E06B3/6604 E06B3/6617 E06B3/66347

E06B3/66361 E06B3/66366 E06B3/667 E06B3/67308 E06B3/677

E06B3/9608 E06B2003/6638 E06B2003/66395

**European:** E06B3/24 E06B3/30 E06B3/54G E06B3/56 E06B3/663B10

E06B3/663B8B E06B3/663B9 E06B3/667 E06B3/66A E06B3/66F

E06B3/673B2 E06B3/677 P06B3/663B10 P06B3/663B30 P06B3/663B402

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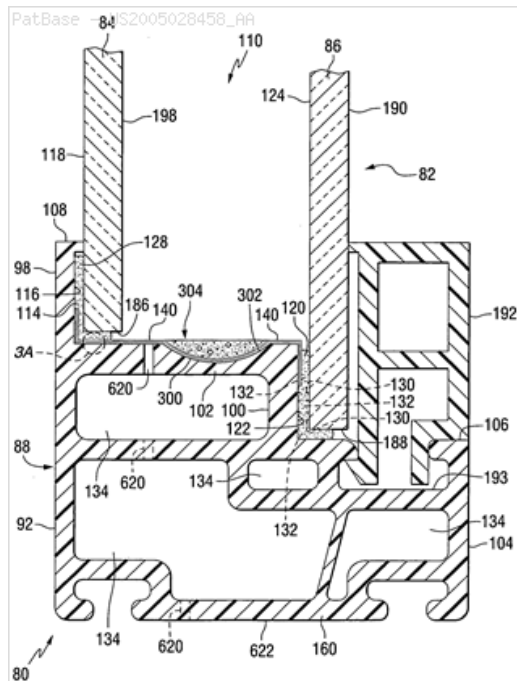
P06B3/96C2

**US:** 156/109 156/556 29/417 29/417S 428/34 52/172 52/172P 52/203

52/203P 52/204.5 52/204.500P 52/204.500S 52/204.593 52/204.595

52/204.595S 52/204.6 52/204.61 52/204.62 52/204.7 52/204.705

52/204.71 52/204.710S 52/209 52/314 52/456 52/483.1 52/656.5



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CA2530588 AA       | 20051222         | CA20042530588      | 20040623         |
| CA2530588 C        | 20081118         | CA20042530588      | 20040623         |
| CN1867749 A        | 20061122         | CN200480021595     | 20040623         |
| CN1867749 B        | 20111005         | CN200480021595     | 20040623         |
| MXPA05014154 A1    | 20060224         | MX2005PA14154      | 20040623         |
| US2005028458 AA    | 20050210         | US20040874503      | 20040623         |
| US2005028459 AA    | 20050210         | US20040874435      | 20040623         |
| US2005028460 AA    | 20050210         | US20040874682      | 20040623         |
| US2005034386 AA    | 20050217         | US20040874721      | 20040623         |
| US2007261325 AA    | 20071115         | US20070696483      | 20070404         |
| US2007261358 AA    | 20071115         | US20070696432      | 20070404         |
| US2007261359 AA    | 20071115         | US20070696406      | 20070404         |
| US2007261795 AA    | 20071115         | US20070696377      | 20070404         |
| US7490445 BB       | 20090217         | US20040874682      | 20040623         |
| US7588653 BB       | 20090915         | US20040874435      | 20040623         |
| US7739851 BB       | 20100622         | US20070696432      | 20070404         |
| US7765769 BB       | 20100803         | US20040874503      | 20040623         |
| US7827761 BB       | 20101109         | US20070696406      | 20070404         |
| US7856791 BB       | 20101228         | US20070696483      | 20070404         |
| US7950194 BB       | 20110531         | US20070696377      | 20070404         |
| US7997037 BB       | 20110816         | US20040874721      | 20040623         |
| WO05001229 A2      | 20050106         | WO2004US20182      | 20040623         |
| WO05001229 A3      | 20050310         | WO2004US20182      | 20040623         |
| WO06002264 A1      | 20060105         | WO2005US22113      | 20050622         |
| WO06002269 A1      | 20060105         | WO2005US22125      | 20050622         |
| WO06002270 A1      | 20060105         | WO2005US22126      | 20050622         |
| WO08024605 A1      | 20080228         | WO2007US75071      | 20070802         |
| WO08024605 C1      | 20080529         | WO2007US75071      | 20070802         |

#### Priority:

|                         |                        |                        |
|-------------------------|------------------------|------------------------|
| US20030480621P 20030623 | US20040874435 20040623 | US20040874682 20040623 |
| US20040874503 20040623  | US20040874721 20040623 | WO2004US20182 20040623 |
| US20060839399P 20060822 | US20070696432 20070404 | US20070696406 20070404 |
| US20070696377 20070404  | US20070696483 20070404 |                        |

**Probable Assignee:** PPG IND OHIO INC

**Assignee(s):** (std): ARBAB MEHRAN ; BUCHANAN MICHAEL ; CRANDELL STEPHEN L ; DAVIS WILLIAM B ; PPG IND OHIO INC ; ROSSKAMP BARENT A ; STEFFEK CORY D ; PPG INDUSTRIES OHIO INC ; SISKOS WILLIAM R ; PPG INDUSTRIES INC

**Assignee(s):** PPG IND ; VITRO SAB DE CV ; PPG IND INC ; GALLAGHER RAYMOND G ; KLINGENSMITH WILLIAM

**Inventor(s):** (std): DAVIS WILLIAM B ; GALLAGHER RAYMOND G ; KLINGENSMITH WILLIAM ; MEHRAN CRANDELL STEPHEN L ; ARBA ; ROSSKAMP BARENT A ; STEFFEK CORY D ; SISKOS WILLIAM R ; MEHRAN ARBAB ; CRANDELL STEPHEN L ; ARBAB MEHRAN ; BUCHANAN MICHAEL

**Inventor(s):** ARBAB MEHRAN 1520 ASHBURY LANE ; ROSSKAMP BARENT ; STEFFEK CORY ; SISKOS WILLIAM ; GALLAGHER RAYMOND ; CRANDELL STEPHEN ; DAVIS WILLIAM

**Agent(s):** BORDEN LADNER GERVAIS LLP; PPG IND INC INTELLECTUAL PROPERTY DEPT; ANDREW C SIMINERIO PPG IND INC; SIMINERIO ANDREW C; ANDREW C

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE

DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE  
KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE  
NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT  
TZ UA UG US UZ VC VN YU ZA ZM ZW

19) Family number: 31880444 (EP1529894A1)

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Title: Wide span beam

Abstract: The beam has reinforcement (13) with an internal reinforcement formed of upper and lower reinforcement parts (13.1, 13.2). Each part has superimposed units (13.11, 13.12, 13.21, 13.22) whose length decreases equally from two ends of the beam and extends from upper and lower free ends of the beam based on preset variation. The units' total section is equal to a minimal value calculated based on beam dimensions and loads applied on beam.

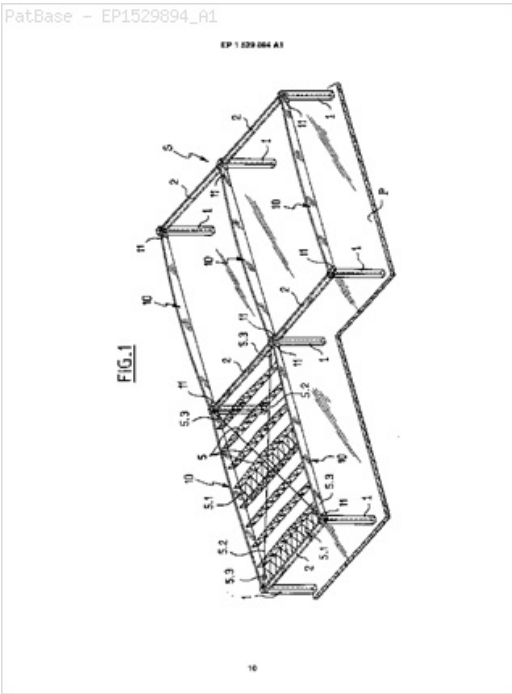
Classifications:

International (IPC 8-9): E04C3/18 (Advanced/Invention);  
E04C3/12 (Core/Invention)

International (IPC 1-7): E04C3/00 E04C3/18 E04C5/00

CPC: E04C3/122 E04C3/185

European: E04C3/12A E04C3/18B



Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CA2483086 AA       | 20050506         | CA20042483086      | 20041028         |
| EP1529894 A1       | 20050511         | EP20040292414      | 20041012         |
| FR2862076 A1       | 20050513         | FR20030013031      | 20031106         |
| FR2862076 B1       | 20060217         | FR20030013031      | 20031106         |
| MA27304 A1         | 20050502         | MA20040027913      | 20041022         |

Priority:

FR20030013031 20031106 CA20042483086 20041028

Probable Assignee: PITAULT DANIEL

Assignee(s): (std): PITAULT DANIEL

Assignee(s): DANIEL ; DANIEL PITAULT ; PITAULT

Inventor(s): (std): PITAULT DANIEL

Inventor(s): DANIEL PITAULT

Agent(s): GOUDREAU GAGE DUBUC; CABINET BOETTCHER

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

20) Family number: 32016881 (EP1544404A1)

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Title: Bar grating with removable locked bars

Abstract: The grille has longitudinal bars (2, 3) each comprising connection slugs connected with coupling slugs of transversal bars (4, 5). Each connection slug has form and length adapted for being received in transversal cut (142) of respective coupling slugs. Connection segments of respective connection slugs are limited by shoulders (127E, 126E) axially arranged opposite to stop surfaces (148B, 149B) of the corresponding coupling slug.

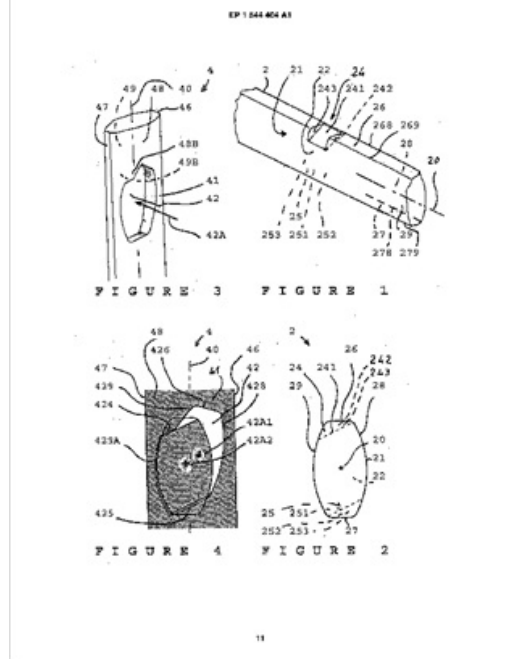
Classifications:

International (IPC 8-9): E04C2/42 E04H17/14 E06B9/00 E06B9/01  
F16B9/00 F16S3/08 (Advanced/Invention);

E04C2/30 E06B9/00 E06B9/01 F16B9/00 F16S3/00 (Core/Invention)

International (IPC 1-7): E04C2/42 E04H17/14 E06B9/00 E06B9/01  
F16B9/00 F16S3/08

CPC: E06B9/01



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE602004037093 D1  | 20120524         | DE200460037093T    | 20040416         |
| EP1544404 A1       | 20050622         | EP20040291015      | 20040416         |
| EP1544404 B1       | 20120328         | EP20040291015      | 20040416         |
| FR2864201 A1       | 20050624         | FR20030014990      | 20031219         |
| FR2864201 B1       | 20060210         | FR20030014990      | 20031219         |

**Priority:**

FR20030014990 20031219 EP20040291015 20040416

**Probable Assignee:** DECAYEUX ETS

**Assignee(s):** (std): DECAYEUX ETS

**Assignee(s):** ETABLISSEMENTS DECAYEUX

**Inventor(s): (std):** DECAYEUX ETIENNE ; SINOQUET REGIS

**Inventor(s):** REGIS FIRMIN RAYMOND SINOQUET ; ETIENNE DECAYEUX

**Agent(s):** CABINET HIRSCH AND ASSOCIES; HIRSCH AND ASSOCIES; CABINET HIRSCH ET ASSOCIES

**Designated states:** BE DE GB

**21) Family number: 32082086 (US2005150103A)**

**Title:** DEVICE FOR THE ASSEMBLY OF STANDARD ELEMENTS INTENDED FOR THE CREATION OF PRECISION MECHANICAL STRUCTURES

**Abstract:** A device for the assembly of at least two standard elements (EB) of a precision mechanical structure by means of a linking element, where the first standard element includes a reference surface, while the second standard element includes a bearing surface which has to be positioned with precision in an orthonormal coordinate system associated with the aforementioned reference surface, given that the connection between the linking element and at least one of said standard elements (EB) includes: two contact faces provided on said linking element and said standard element (EB) respectively, a clamp composed of two half collars, held together by tightening means, and presenting shapes which interlock with the corresponding shapes of said linking element and of said standard element (EB) in such a way that the clamping of the two half collars causes the application and the centring of the two aforementioned contact faces against each other.

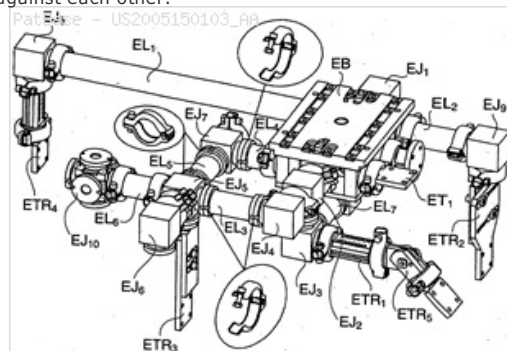
### Classifications:

**International (IPC 8-9):** B23P19/00 B25J15/00 F16B7/00 F16L21/06 F16L23/10 (Advanced/Invention); E04B1/58 (Advanced/Non-invention); B23P19/00 B25J15/00 F16B7/00 F16L21/06 F16L23/00 (Core/Invention); E04B1/58 (Core/Non-invention)

**International (IPC 1-7):** B23P19/00 B25J15/00 F16B7/00 F16L23/10  
**CPC:** B25J15/0061 F16L21/065 E04B1/585 E04B2001/5868 F16L23/10  
 Y10T29/53435

**European:** F16L21/06B F16L23/10 P04B1/58C2C P04B1/58H

**US:** 29/799 901/30



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP1704356 A1       | 20060927         | EP20040816409      | 20041216         |
| FR2864920 A1       | 20050715         | FR20040000158      | 20040109         |
| FR2864920 B1       | 20060804         | FR20040000158      | 20040109         |
| US2005150103 AA    | 20050714         | US20040977148      | 20041029         |
| US7331104 BB       | 20080219         | US20040977148      | 20041029         |
| WO05075874 A1      | 20050818         | WO2004FR03274      | 20041216         |

**Priority:**

FR20040000158 20040109 WO2004FR03274 20041216

**Probable Assignee:** DELAWARE CAPITAL FORMATION INC**Assignee(s):** (std): LENEVEU BRUNO ; NORJOUX LAURENT ; ROCTON PHILIPPE ; CARASSO PHILIPPE**Assignee(s):** DELAWARE CAPITAL FORMATION INC ; SPIDERTECH**Inventor(s):** (std): CARASSO PHILIPPE ; LENEVEU BRUNO ; LEVENEU BRUNO ; NORJOUX LAURENT ; ROCTON PHILIPPE**Agent(s):** RAGGIO AND DINNIN PC**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW**22) Family number: 33153901** (US2008115435A)

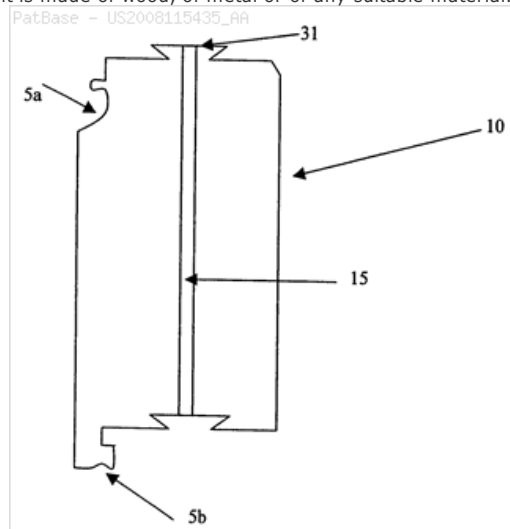
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**Title:** COMPLETE ASSEMBLING OF MASSIVE ELEMENTS

**Abstract:** The present invention relates to an assembling whole, for the building of living places or for the area of toys. The whole comprises massive assembling bricks wearing lateral binding grooves, an upper binding groove and a lower binding groove designed for the assembling of the bricks, characterized in that the lateral groove is meant to bear a binding element uniting the bricks two by two. The invention also relates to a lock key for the assembling of two bricks by means of the lateral binding grooves, comprising a strip for key locking which sticks an assembling shim to lateral grip walls inside the binding grooves. The invention is made of wood or of any suitable material. The binding element is made of wood, of metal or of any suitable material.

**Classifications:**

**International (IPC 8-9):** A63H33/08 B27F1/00 B27M3/00 B32B37/12 E04B1/10 E04B1/61 E04B2/08 E04B2/66 E04B2/70 E04C3/14 E04G21/14 (Advanced/Invention); A63H33/04 B27M3/00 E04B1/61 E04B2/04 E04B2/64 E04B2/70 E04C3/12 E04G21/14 (Core/Invention); E04B (Subclass/Invention)  
**International (IPC 1-7):** E04B2/70  
**CPC:** E04B2/08 E04B2/702 E04B2001/2648 E04B2002/0234 E04B2002/0236 E04B2002/0252 B27M3/006 B27M3/0066 E04C3/14 B27M3/0026 E04B2/705  
**European:** B27M3/00D12 B27M3/00D4 B27M3/00D6 E04B2/08 E04B2/70B1 E04B2/70B4 E04C3/14 P04B1/26B13S P04B2/02M2A P04B2/02M2A1 P04B2/02M3D  
**US:** 144/347 156/91 156/91S 52/233 52/233P 52/286 52/585.1 52/586.2 52/589.1 52/590.1 52/747.1

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CA2595014 AA       | 20070717         | CA20062595014      | 20060104         |
| CA2761730 AA       | 20100225         | CA20082761730      | 20080820         |
| DE602008037829 D1  | 20150603         | DE200860037829T    | 20080820         |
| EP1838932 A1       | 20071003         | EP20060704668      | 20060104         |
| EP2326774 A1       | 20110601         | EP20080806893      | 20080820         |
| EP2326774 B1       | 20150422         | EP20080806893      | 20080820         |
| FR2880904 A1       | 20060721         | FR20050000601      | 20050120         |
| FR2880904 B1       | 20140829         | FR20050000601      | 20050120         |
| IN05766DN2007 A    | 20070817         | IN2007DN05766      | 20070725         |
| US2008115435 AA    | 20080522         | US20060795371      | 20060104         |
| US2011203203 AA    | 20110825         | US20110932199      | 20110218         |
| US8662120 BB       | 20140304         | US20110932199      | 20110218         |
| WO06077300 A1      | 20060727         | WO2006FR00011      | 20060104         |
| WO10020829 A1      | 20100225         | WO2008IB02168      | 20080820         |
| ZA200706025 A      | 20090325         | ZA20070006025      | 20060104         |

**Priority:**FR20050000601 20050120 WO2006FR00011 20060104 US20070795371 20070911  
EP20080806893 20080820 WO2008IB02168 20080820 US20110932199 20110218

**Probable Assignee:** MANDOCE ALAIN

**Assignee(s):** (std): JIM RIVIERE ; MANDOCE ALAIN ; MANDOCE ALAIN FLORENTIN ; RIVIERE JIM

**Assignee(s):** ALAIN FLORENTIN MANDOCE ; HANCOCE

**Inventor(s):** (std): MANDOCE ALAIN FLORENTIN ; RIVIERE JIM ; JIM RIVIERE

**Inventor(s):** ALAIN FLORENTIN MANDOCE ; HANCOCE

**Agent(s):** BERESKIN AND PARR; ROBIC; BURTIN JEAN FRANCOIS; CELANIE CHRISTIAN; CABINET CELANIE; HEDMAN AND COSTIGAN PC; OLIFF AND BERRIDGE PLC

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

**23) Family number: 34032940 (WO06136220A1)**

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**Title:** EARTHQUAKE-PROOF WALL ASSEMBLY

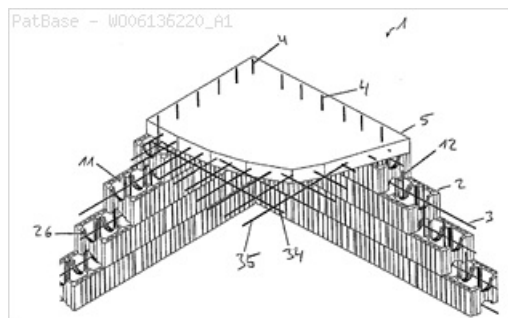
**Abstract:** The invention relates to an earthquake-proof wall assembly (1) composed of hollow blocks (2) which each have a horizontal opening (26) and at least one passage (24) arranged perpendicularly to the opening (26). Through the hollow blocks are formed horizontal channels (12) and vertical channels (11) through which are guided reinforcing struts (32, 31) which form a reinforcing fabric. Also provided are L-shaped reinforcing elements (4) having one leg (41) embedded in a vertical channel (11) and their other leg (42) embedded in the ceiling element (5). The invention further relates to a method of producing an earthquake-proof wall assembly and to a building having at least one storey, formed from earthquake-proof wall assemblies, comprising at least four walls, a floor element (5) and a ceiling element (5), the side walls being connected to the floor element (5) and the ceiling element (5) by means of L-shaped reinforcing elements (4) in such a way that a cuboidal lattice structure is formed by the reinforcing struts and elements (31, 32, 4).

**Classifications:**

**International (IPC 8-9):** E04B2/54 E04H9/02 (Advanced/Invention); E04B2/42 E04H9/02 (Core/Invention)

**CPC:** E04B2/54 E04B5/32 E04B2002/0208 E04B2002/0226 E04H9/02

**European:** E04B2/54 E04B5/32 E04H9/02 P04B2/02M1B P04B2/02M1F



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP1899543 A1       | 20080319         | EP20060724159      | 20060408         |
| WO06136220 A1      | 20061228         | WO2006EP03222      | 20060408         |

**Priority:**

EP20050013285 20050620

EP20060724159 20060408

WO2006EP03222 20060408

**Probable Assignee:** KILICKAYA KENAN

**Assignee(s):** (std): KILICKAYA KENAN

**Inventor(s):** (std): KILICKAYA KENAN

**Agent(s):** RUEHLAND HANS CONSTANTIN ET AL

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

**24) Family number: 34110654 (EP1745901A3)**

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**Title:** METHOD AND DEVICE FOR PRODUCING A MOULDED BRICK, MOULDED BRICK AND CONSTRUCTION OF AT LEAST TWO MOULDED BRICKS

**Abstract:** The method involves partially inserting an filling made of an insulating material into a channel (14) of a moulded brick (16), where a cuboid shaped body of the brick consists of two parallel large surfaces that are aligned parallel and are at a distance to each other, and a right angled running side surfaces. The channel runs parallel to the side surfaces and is right angled to the large surfaces. A portion of the channel is filled with free flowing or blister insulating particles made of mineral fibers with or without adhesive cement. Independent claims are also included for the following: (1) a moulded brick, particularly a building brick, clay brick with a cuboid shaped body (2) a device for implementing the method for producing a moulded brick (3) a building, particularly a wall that consists of two moulding bricks.

**Classifications:**

**International (IPC 8-9):** B28B11/00 B28B11/04 C04B26/12 C04B26/32 C04B28/24 C04B28/26 C04B30/02 E04B1/14 E04B2/02 E04B2/16

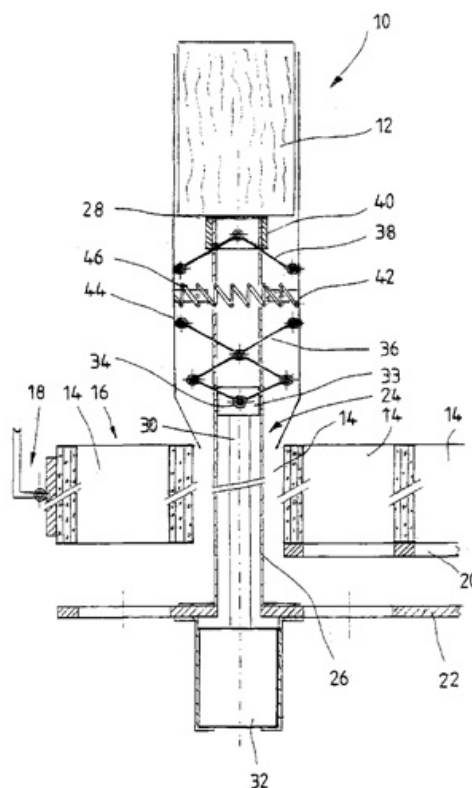
E04B2/42 E04C1/40 E04C1/41 (Advanced/Invention); B28B11/00 B28B11/04 E04B1/02 E04B2/02 E04B2/42 E04C1/00 (Core/Invention)

**CPC:** Y02W30/97 C04B26/12 C04B26/32 C04B28/24 C04B28/26 C04B30/02 C04B2111/00612 E04B2002/0291 Y02P40/63 E04B2/16

B28B11/042 B28B11/043 E04B2002/0208 E04B2002/0226  
E04B2002/0293 B29C44/186 B29C44/445 B29K2025/06 B29L2031/102  
**European:** B28B11/04B B28B11/04B1 C04B26/12 C04B26/32  
C04B28/24 C04B28/26 C04B30/02 E04B2/16 M04B111/00T6  
P04B2/02M1B P04B2/02M1F P04B2/02N11A P04B2/02N11B

PatBase - EP1745901\_A2

Fig. 1



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE102006022516 A1  | 20070201         | DE200610022516     | 20060515         |
| DE102006034073 A1  | 20070405         | DE200610034073     | 20060720         |
| DE502006014711 D1  | 20160225         | DE200650014711T    | 20060720         |
| EP1745901 A2       | 20070124         | EP20060015130      | 20060720         |
| EP1745901 A3       | 20080423         | EP20060015130      | 20060720         |
| EP1745901 B1       | 20170906         | EP20060015130      | 20060720         |
| EP1745902 A2       | 20070124         | EP20060015133      | 20060720         |
| EP1745902 A3       | 20080423         | EP20060015133      | 20060720         |
| EP1745902 B1       | 20160113         | EP20060015133      | 20060720         |
| EP3266575 A1       | 20180110         | EP20170179333      | 20060720         |
| ES2564170 T3       | 20160318         | ES20060015133T     | 20060720         |
| ES2642589 T3       | 20171116         | ES20060015130T     | 20060720         |
| HU027193 T2        | 20161028         | HU20060015133T     | 20060720         |
| PL1745902 T3       | 20160930         | PL20060015133T     | 20060720         |

#### Priority:

DE200510034807 20050721 DE200610022516 20060515 DE200610034073 20060720  
EP20060015133 20060720 EP20060015130 20060720

**Probable Assignee:** ROCKWOOL INT

**Assignee(s):** (std): ROCKWOOL INT ; ROCKWOOL INT A S ; ROCKWOOL MINERALWOLLE

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**Agent(s):** KILBURN AND STRODE LLP; STENGER WATZKE AND RING;  
RAUSCHWANISCHECKBRINKMANNINTELLECTUAL PROPERTY; STENGER WATZKE RING; RAUSCH  
WANISCHECK BERGMANN BRINKMANN; CARPINTERO MARIO; CAMPELLO REYES

**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK NL PL PT RO RS SE  
SI SK TR YU

**25) Family number: 34280337** (FR2890090B)

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**Title:** BLOC DE BETON PREFABRIQUE A FACES RECTIFIEES ET REDAN

**Abstract:** The block has upper and lower assembling sides (2, 3), facing sides (4, 5) and lateral joining sides (6, 7). The sides (2,

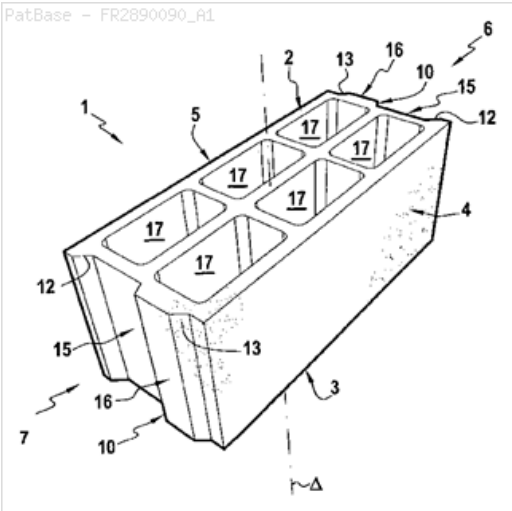
3) are rectified, and each of the sides (6, 7) has lateral projections (12, 13) and a central projection (10) extending from the side (3) to the side (2). The central projection is located at a distance, from each facing side, greater than one-thirds and lesser than two-thirds of the measured thickness of the block between the facing sides. The joining sides are symmetric with each other with respect to a central axis orthogonal to the sides (2, 3). An independent claim is also included for a method of fabricating a concrete slab or footer, for erecting a wall in prefabricated blocks.

**Classifications:**

**International (IPC 8-9):** E04C 1/00 (Advanced/Invention);  
E04C 1/00 (Core/Invention)

**CPC:** E04B2/16 E04B5/32 E04B2002/0226 E04B2002/026 E04B2005/322

**European:** E04B2/16 E04B5/32 P04B2/02M1F P04B2/02N2 P04B5/32A



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR2890090 A1       | 20070302         | FR20050008893      | 20050831         |
| FR2890090 B1       | 20090227         | FR20050008893      | 20050831         |

**Priority:**

FR20050008893 20050831

**Probable Assignee:** FABEMI GESTION SOC PAR ACTIONS

**Assignee(s):** (std): FABEMI GESTION SOC PAR ACTIONS

**Assignee(s):** FABEMI GESTION SOC PAR ACTIONS SIMPLIFIEE ; FABEMI GESTION SOCIETE PAR ACTIONS SIMPLIFIEE ;  
FABEMI GESTION

**Inventor(s):** (std): DUMONT PIERRE

**Inventor(s):** PIERRE DUMONT

**Agent(s):** CABINET BEAU DE LOMENIE

**26) Family number: 41939231 (FR2910032A)**

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**Title:** MODULAR CONSTRUCTION ELEMENT FOR E.G. INNER WALL, OF BUILDING, HAS OPENINGS TRAVERSING CORE BETWEEN SURFACES OF BODY, WHERE CENTER OF EACH OPENING IS POSITIONED AT MIDDLE OF SQUARE HAVING SIDES EACH CORRESPONDING TO WIDTH BETWEEN WALLS

**Abstract:** The element (10) has two parallel walls (12, 13) surrounding a central core (14), where length of each wall is multiple of total external width between the walls. Each wall creates a male-female assembling system at opposite longitudinal ends, and upper and lower surfaces of a body (11) for permitting a double fitting with an adjacent element. A set of openings (19, 20) vertically traverses the core between the surfaces of the body. Center of each opening is positioned at middle of a square having sides each corresponding to the width between the walls. An independent claim is also included for a wall of a building obtained by assembling a construction element.

**Classifications:**

**International (IPC 8-9):** E04B2/18 E04B2/20

E04C 1/00 (Advanced/Invention);

E04B2/14 E04C 1/00 (Core/Invention)

**CPC:** E04B2/18 E04B2002/0206

**European:** E04B2/18 P04B2/02M1A

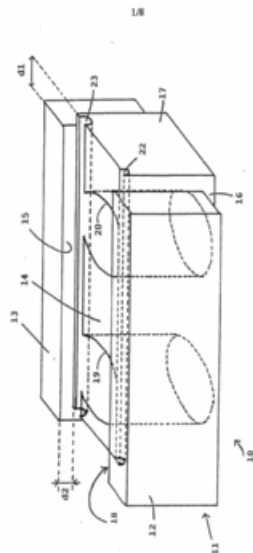


Figure 1

Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR2910032 A1       | 20080620         | FR20060010924      | 20061215         |

Priority:

FR20060010924 20061215

**Probable Assignee:** MARCOCCIA GERARD  
**Assignee(s):** (std): MARCOCCIA GERARD  
**Assignee(s):** GERARD MARCOCCIA  
**Inventor(s):** (std): MARCOCCIA GERARD ; MARCOCCIA SEBASTIEN  
**Inventor(s):** SEBASTIEN MARCOCCIA ; GERARD MARCOCCIA  
**Agent(s):** CABINET HECKE

27) Family number: 40925194 (US2009090070A)

PatBase

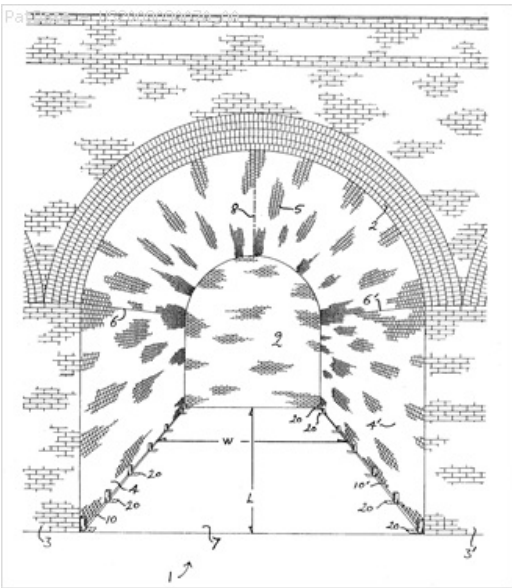
Title: RAILWAY ARCH LININGS AND MEZZANINE FLOORS

**Abstract:** A system for lining arched structures, particularly railway arches (1), provides a plurality of elongate, flexible frame elements (70), each protected by a flexible shield (149) and engaged frictionally against the curved soffit (5) by hoop stress applied at either end, preferably by a pair of installation tools (300) mounted on stanchions (40). Each tool includes a pivoting ratchet which allows the flexible frame element (70) to be formed into an arched shape on the ground and then raised into a vertical plane prior to installation. Each frame element (70) may comprise a unitary "top-hat" profile with deformable hinges, each hinge having an associated deformation structure which distributes bending forces evenly during installation. The frame elements (70) are fixed to the stanchions (40) to support them at either end in their installed position, providing a self-supporting, arched framework which relies upon the masonry soffit (5) for its shape and stability. Alternatively, each frame element may comprise joints which are remotely locked in the installed position, allowing the frame element to be decoupled from the soffit. The framework is installed from ground level, and the stanchions support a temporary mezzanine floor made from modular interlocking panels, which provides access to the soffit for installation of cooperating, flat lining panels, each panel comprising a foamed plastics body with downwardly directed channels and interlocking upper and lower edges which cooperate to form an angularly adjustable joint. A column mounting assembly comprises a base element (1050) adapted for attachment to an upwardly facing support surface (7') of a concrete slab (7), and having a mounting structure for supporting the column (1000). The base element may form a cantilever which overhangs an edge of the support surface, with part of the vertical load being transferred from the column to a flat plate (1070) arranged on the ground surface (16') beneath the mounting structure. The mounting structure may comprise a central support (1064?, 1068) on which the column is pivotably balanced, and which is vertically adjustable so as to adjust the overall height of the column, with a plurality of independently adjustable lateral supports (1065?, 1069, 1069'; 1066?, 1069, 1069') arranged around it to support the column in a vertical orientation. Conveniently, the mounting structure comprises a set of threaded rods (1064, 1065, 1066) which are advanced downwardly through the overhanging portion (1057) so as to transfer the vertical load from the column to the plate. The assembly may be used in supporting columns above a soakaway (10?) in a railway arch. A roll-formed stanchion generally of "top-hat" form and defining a stiffening tubular section is also disclosed.

Classifications:

**International (IPC 8-9):** E01D21/00 E01D4/00 E04B1/32 E04B9/06 E04C2/52 E04C3/04 E04D13/15 E04F13/02 E04F13/08 E04F15/02 E04F15/024 E04F21/00 E04H12/22 E21D11/04 E21D11/18 (Advanced/Invention); E04C3/04 (Advanced/Non-invention); E04B1/00 E04B1/32 E04B9/00 E04B9/06 E04F13/00 E04F13/08 E21D11/14 (Core/Invention)  
**International (IPC 1-7):** E04B1/32 E04B9/06 E04F13/08

**CPC:** E04F13/0803 E04B9/061 E04B9/064 E04B9/065 E04C2003/0473  
E04C2/52 E04F13/0805 E04F13/0869 E04H12/2238 E04H12/2284  
E04F15/02 E04F15/02405 E04B1/3205 E04B9/06 E04F13/081  
**European:** E04B1/32B E04B9/06 E04B9/06A E04B9/06E E04B9/06F  
E04F13/08B2C P04C3/04S3U P04F13/08B2  
**US:** 52/94 52/94P



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2008306580 AA    | 20090409         | AU20080306580      | 20081003         |
| AU2008306580 BB    | 20140731         | AU20080306580      | 20081003         |
| DE602008038091 D1  | 20150618         | DE200860038091T    | 20081003         |
| EP2231940 A2       | 20100929         | EP20080835682      | 20081003         |
| EP2231940 B1       | 20150506         | EP20080835682      | 20081003         |
| GB200719407 A0     | 20071114         | GB20070019407      | 20071003         |
| GB200722955 A0     | 20080102         | GB20070022955      | 20071122         |
| GB200802370 A0     | 20080312         | GB20080002370      | 20080208         |
| GB200812300 A0     | 20080813         | GB20080012300      | 20080704         |
| GB200818127 A0     | 20081105         | GB20080018127      | 20081003         |
| GB201017665 A0     | 20101201         | GB20100017665      | 20081003         |
| GB201017666 A0     | 20101201         | GB20100017666      | 20081003         |
| GB201017667 A0     | 20101201         | GB20100017667      | 20081003         |
| GB201017669 A0     | 20101201         | GB20100017669      | 20101019         |
| GB2453362 A1       | 20090408         | GB20070019407      | 20071003         |
| GB2453362 A8       | 20090506         | GB20070019407      | 20071003         |
| GB2453840 A1       | 20090422         | GB20080018127      | 20081003         |
| GB2453840 B2       | 20101229         | GB20080018127      | 20081003         |
| GB2474936 A1       | 20110504         | GB20100017665      | 20081003         |
| GB2474936 B2       | 20120516         | GB20100017665      | 20081003         |
| GB2475137 A1       | 20110511         | GB20100017666      | 20081003         |
| GB2475137 B2       | 20120516         | GB20100017666      | 20081003         |
| GB2475138 A1       | 20110511         | GB20100017667      | 20081003         |
| GB2475138 B2       | 20120516         | GB20100017667      | 20081003         |
| IN00910MN2010 A    | 20101029         | IN2010MN00910      | 20100504         |
| JP2011516754 T2    | 20110526         | JP20100529471T     | 20081003         |
| JP5630764 B2       | 20141126         | JP20100529471T     | 20081003         |
| US2009090070 AA    | 20090409         | US20080245695      | 20081003         |
| WO09044277 A2      | 20090409         | WO2008IB03091      | 20081003         |
| WO09044277 A3      | 20090911         | WO2008IB03091      | 20081003         |

**Priority:**

|                         |                         |                        |
|-------------------------|-------------------------|------------------------|
| GB20070019407 20071003  | US20070977534P 20071004 | GB20070022955 20071122 |
| US20070989871P 20071123 | GB20080002370 20080208  | GB20080012300 20080704 |
| EP20080835682 20081003  | GB20080018127 20081003  | US20080245695 20081003 |
| WO2008IB03091 20081003  | GB20100017665 20081003  |                        |

**Probable Assignee:** FINCH STEVEN CAFFALL

**Assignee(s):** (std): FINCH STEVEN ; FINCH STEVEN C ; FINCH STEVEN CAFFALL ; NELSON ANTOINE ; STEVEN CAFFALL FINCH ; STEVEN FINCH

**Inventor(s):** (std): FINCH STEVE ; FINCH STEVEN CAFFALL

**Inventor(s):** STEVE FINCH ; STEVEN CAFFALL FINCH

**Agent(s):** FINCH STEVEN CAFFALL; STEVEN CAFFALL FINCH; FINCH STEVE

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG UZ VC VN ZA ZM ZW

**Title:** MODULAR FORM FOR BUILDING A PREINSULATED, ROUGHLY FINISHED CONCRETE WALL AND METHOD OF BUILDING A STRUCTURE THEREWITH

**Abstract:** A system of building modules that may readily be assembled into wall structures that, when filled with concrete forms an insulated, roughly-finished wall structure ready to receive both exterior and interior wall treatments. The building modules may readily be assembled by relatively untrained personnel and forms walls typically having an overall R-value in the range of approximately 30. The novel building modules eliminate the need for setting traditional concrete forms and of finishing a bare concrete wall. The modules are provided in various lengths, the lengths typically being multiples of 16 inches.

**Classifications:**

**International (IPC 8-9):** E04B2/00 E04B2/42 E04B2/48

E04B2/86 (Advanced/Invention);

E04B2/86 (Core/Invention)

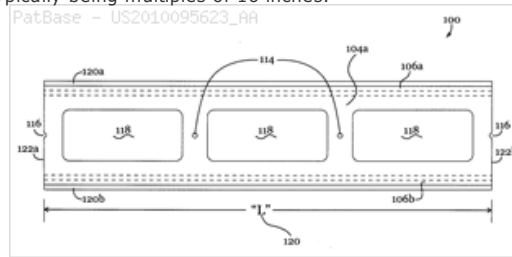
**CPC:** E04B2/16 E04B2/86 E04B2/8635 E04B2002/0213 E04B2002/0228

E04B2002/0247 E04B2002/0254 E04B2002/867

**European:** E04B2/16 E04B2/86 E04B2/86G P04B2/02M1D P04B2/02M1G

P04B2/02M3B P04B2/02M3E P04B2/86P

**US:** 52/426 52/426P 52/742.14 52/742.140S 52/745.09 52/745.090S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2010095623 AA    | 20100422         | US20080288114      | 20081017         |
| US2011296783 AA    | 20111208         | US20110135082      | 20110624         |

**Priority:**

US20080288114 20081017 US20110135082 20110624

**Probable Assignee:** HICKS BRIAN D

**Assignee(s):** (std): HICKS BRIAN D

**Inventor(s):** (std): HICKS BRIAN D

**Agent(s):** WILLIAMS G SYKES

**Title:** PROCEDE DE FABRICATION D'UN BLOC DE CONSTRUCTION ET BLOC DE CONSTRUCTION

**Abstract:** The method involves forming a bossage on a wall of a construction block i.e. adhesive block (1), where the bossage determines height (h) of the construction block. The wall of the construction block is adjusted for adjusting height of the construction block, in which the bossage is adjusted. The bossage is projected vertically on the wall, where height (hb) of the bossage is equal to an absolute value of tolerance of a molding device applied to height of the block. An independent claim is also included for a construction block used for mounting a wall of a building.

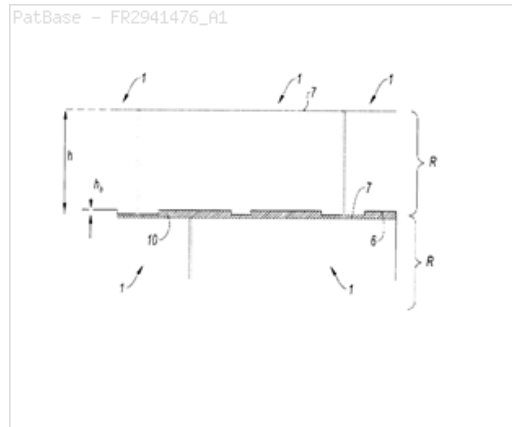
**Classifications:**

**International (IPC 8-9):** E04C1/00 (Advanced/Invention);

E04C1/00 (Core/Invention)

**CPC:** E04B2/18 E04B2002/0208 E04B2002/0226 E04B2002/0284

**European:** E04B2/18 P04B2/02M1B P04B2/02M1F P04B2/02N9B



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR2941476 A1       | 20100730         | FR20090050469      | 20090126         |
| FR2941476 B1       | 20150807         | FR20090050469      | 20090126         |

**Priority:**

FR20090050469 20090126

**Probable Assignee:** TARMAC MATERIAUX DE CONSTRUCTI

**Assignee(s):** (std): TARMAC MATERIAUX DE CONSTRUCTI ; TARMAC MATERIAUX DE CONSTRUCTION

**Inventor(s):** (std): COSNIER BERNARD ; SICARD DENIS ROBERT

**Inventor(s):** DENIS ROBERT SICARD ; BERNARD COSNIER

**Agent(s):** CABINET BLOCH AND BONNETAT; GEVERS FRANCE; GEVERS AND ORES

**Title:** WOODEN I.E. SOLID WOOD, BASED MODULAR BLOCK FOR CONSTRUCTING E.G. PARTITION, HAS PLANE SEPARATING RIB AND GROOVE INTO PARTS, SO THAT PARTS ARE PLACED ON SIDE OF PLANE, WHERE PART OF RIB ON ANOTHER SIDE OF PLANE COMPRISES SIDE

**Abstract:** The block (1) has a groove i.e. under cut groove (9), for presenting undercut sides (9A, 9B) symmetrically with respect to a symmetry plane (P), where the block is presented in the form of a parallelepipedic shaped body or an S shaped body. The plane separates a rib (6) and the groove into two parts (P1, P2), so that the parts are placed on a side of the plane. The parts present a complementary shape. The part of the rib on another side of the plane comprises a side (8) deprived of an under cut zone with respect to the part of the groove on the latter side of the plane. Independent claims are also included for the following: (1) a method for assembling modular blocks (2) a wall element formed by an assembly of blocks.

**Classifications:**

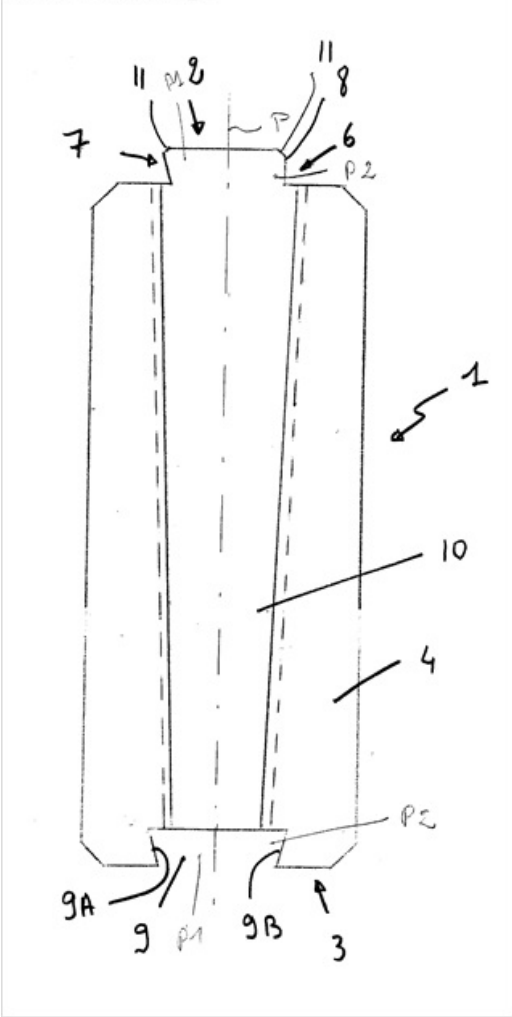
**International (IPC 8-9):** E04B1/10 E04B2/08

E04C 1/00 (Advanced/Invention)

**CPC:** E04B2/08 E04B2/705 E04B2002/0236

**European:** E04B2/08 E04B2/70B4 P04B2/02M2A1

PatBase - FR2944036\_A1



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR2944036 A1       | 20101008         | FR20090001672      | 20090407         |

**Priority:**

FR20090001672 20090407

|                            |                                  |
|----------------------------|----------------------------------|
| <b>Probable Assignee:</b>  | RADE RODOLPHE                    |
| <b>Assignee(s): (std):</b> | RADE RODOLPHE                    |
| <b>Assignee(s):</b>        | RODOLPHE RADE                    |
| <b>Inventor(s): (std):</b> | RADE RODOLPHE                    |
| <b>Inventor(s):</b>        | RODOLPHE RADE                    |
| <b>Agent(s):</b>           | IPSILON BREMA LOYER; BREMA LOYER |

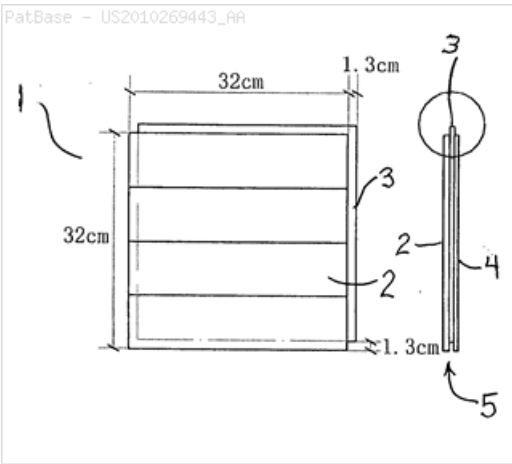
**Title:** TONGUE-IN-GROOVE FLOOR AND WALL PANELS USING MULTIPLE BONDED SHEET CONSTRUCTION

**Abstract:** Interlocking tongue and groove floor and wall panels use multiple bonded sheet construction, preferably three sheets, of material, such as plywood, bonded together Other rigid durable sheet materials may be used. The shape is preferably either square or rectangular. By offsetting the middle sheet layer so that two adjacent sides extend beyond the top and bottom layers which are in registration, a tongue is developed on two adjacent sides while the opposite sides will have grooves. Thus such panels can be used to cover a large floor or wall area using normal tongue-in-groove techniques by fitting the protruding tongues into the grooves of adjacent panels In an alternate embodiment, the middle sheet is smaller in size than the top and bottom

sheets which are in registration. The middle sheet is centered within the top and bottom sheets thus forming grooves on all four edges.

**Classifications:**

**International (IPC 8-9):** B23P17/04 B32B3/00 E04B1/61 E04B2/72 E04B9/04 E04C2/40 E04F13/076 E04F13/10 E04F15/022 E04F15/04 (Advanced/Invention)  
**CPC:** E04F15/02 B32B3/14 B32B21/14 E04C2/16 E04C2/40 E04F13/10 E04F2201/0107 E04F2201/0505 Y10T428/24612 B32B3/06 B32B21/02 E04F13/0894 E04F15/02038 E04F15/04 E04F2201/0511 Y10T29/49936 E04F13/105 B32B7/005 B32B7/02 B32B7/045 B32B7/08 B32B7/12 B32B21/042 B32B21/08 B32B27/08 B32B27/304 B32B2307/3065 B32B2307/7246 B32B2419/06 B32B2471/00 B32B2607/00  
**European:** B32B21/02 B32B21/13 B32B21/14 B32B3/02 B32B3/06 B32B3/14 B32B5/32 E04C2/16 E04C2/40 E04F13/08R3 E04F13/10 E04F15/02B E04F15/04 P04F201/05B  
**US:** 29/521 29/521P 428/172 428/172S 52/506.01 52/506.010S 52/506.09 52/506.090P 52/586.1 52/586.100S 52/592.1 52/592.100S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2010269443 AA    | 20101028         | US20090386825      | 20090423         |
| US2012079707 AA    | 20120405         | US20110134981      | 20110622         |

**Priority:**

US20090380928 20090304      US20090386825 20090423      US20110134981 20110622

**Probable Assignee:** SHEN ZIMING  
**Assignee(s):** (std): SHEN ZIMING  
**Inventor(s):** (std): SHEN ZIMING  
**Agent(s):** ALFRED WALKER

32) Family number: 43760482 (WO11010127A2)

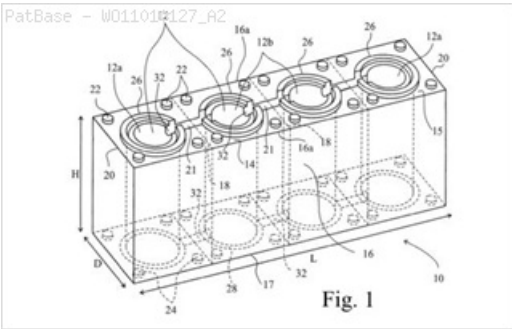
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**Title:** CONCRETE WALL STRUCTURE

**Abstract:** A parallelepiped block (10) of insulating material comprises two sides (16) and two ends (20). The block has top (15) and bottom (17) surfaces. The sides are joined by one or more webs (21) so that, between two facing webs, or between a web and an end, and between the sides, column-forming voids (12) are defined. Upstanding cylindrical flanges (26) are on the top surface (15) around each void. Corresponding cylindrical grooves (28) are on the bottom surface (17). One block is thus disposable on top of another at an angle with respect to the other, with the flanges on one block in engagement with corresponding grooves on the intersecting block, and wherein said engagement locks one block with respect to the other against movement. A wall (100) can be formed with the blocks, and a corner formed through angles between acute and obtuse with interleaving blocks.

**Classifications:**

**International (IPC 8-9):** E04B2/18 E04B2/26 E04C1/41 E04C2/16 (Advanced/Invention)  
**CPC:** E04C1/41 E04B2/8629 E04B2002/0223 E04B2002/0263 E04B2002/867 E04B2/18 E04B2/26  
**European:** E04B2/86F1 E04C1/41 P04B2/02M1E4 P04B2/02N3 P04B2/86P



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP2456932 A2       | 20120530         | EP20100734301      | 20100716         |
| GB200912830 A0     | 20090826         | GB20090012830      | 20090723         |
| GB2472068 A1       | 20110126         | GB20090012830      | 20090723         |
| WO11010127 A2      | 20110127         | WO2010GB51166      | 20100716         |
| WO11010127 A3      | 20120322         | WO2010GB51166      | 20100716         |

**Priority:**

GB20090012830 20090723      WO2010GB51166 20100716

**Probable Assignee:** INNOVATION LTD CONST  
**Assignee(s):** (std): INNOVATION LTD CONST ; WALDRON PETER  
**Assignee(s):** CONSTRUCTION INNOVATION LTD  
**Inventor(s):** (std): WALDRON PETER  
**Inventor(s):** PETER WALDRON

**Agent(s):** STAINTHORPE VANESSA JULIET; LUNT MARK

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**33) Family number: 48769825 (EP2314787B1)**

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**Title:** Self-supporting thermal insulated panel with air gaps

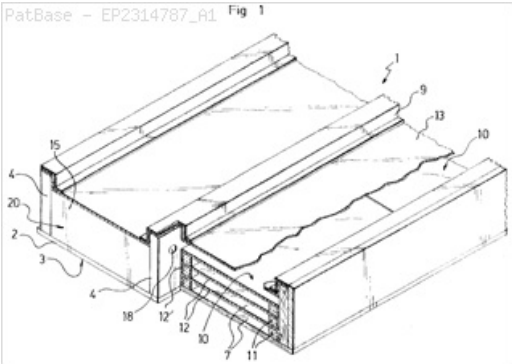
**Abstract:** The box (1) has an air gap (7) defined by parallelepiped thermal insulated modules (10) forming an enclosure constituted of a rectangular chassis (11), where width of the chassis corresponds to a space between stringers (4) fixed on a thermal insulated panel (2). A main face of the chassis extends from a reflecting insulating sheet (12). An insulating block (20) is constituted of a stack of the modules parallel to the panel. The sheet extends below the chassis. A skirt (12') is folded on an outer wall of the chassis. The outer wall of the chassis is made of metal.

**Classifications:**

**International (IPC 8-9):** E04B1/76 E04B7/22 (Advanced/Invention)

**CPC:** E04B1/7654 E04B7/22 E04D13/1625

**European:** E04B1/76E E04B7/22 E04D13/16A1C



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE602010002027 D1  | 20120823         | DE201060002027T    | 20101020         |
| EP2314787 A1       | 20110427         | EP20100188243      | 20101020         |
| EP2314787 B1       | 20120627         | EP20100188243      | 20101020         |
| FR2951473 A1       | 20110422         | FR20090005049      | 20091021         |
| FR2951473 B1       | 20111216         | FR20090005049      | 20091021         |

**Priority:**

FR20090005049 20091021 EP20100188243 20101020

**Probable Assignee:** ORION FINANCEMENT

**Assignee(s):** (std): ORION FINANCEMENT

**Inventor(s):** (std): THIERRY LAURENT

**Inventor(s):** LAURENT THIERRY

**Agent(s):** CABINET BARRE LAFORGUE AND ASSOCIES; CABINET BARRE LAFORGUE ET ASSOCIES

**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

**34) Family number: 50815763 (WO12035118A1)**

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**Title:** RAISED FLOOR

**Abstract:** This dismantlable raised floor comprises an interlocking mechanism that allows panel joints (16) and girders (14) to be alternately interlocked and dismantled, this mechanism comprising: a male part which, on one side of a midplane parallel to the plane of the floor, comprises at least one hook and, on the other side of the midplane, comprises at least one pinhole, a female part comprising, on one side of the midplane, at least one rod (70) able to be housed in the hook and, on the other side of the midplane, at least one pinhole, and a pin (80) that can be moved between: a fitted position in which it passes through the hole and the pinhole to secure the interlocking of the girder and of the panel joint with no degree of freedom, and a removed position in which the girder and the panel joint can be dismantled.

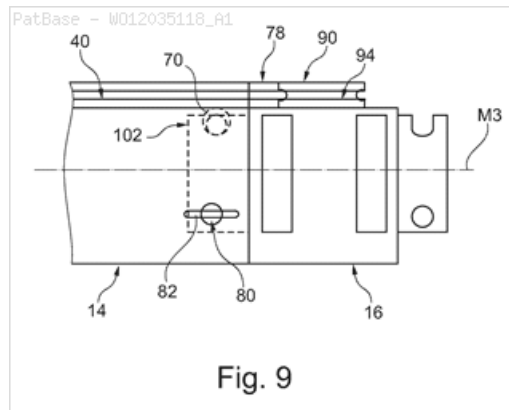
**Classifications:**

**International (IPC 8-9):** E04B5/43 E04F15/024

E04H15/56 (Advanced/Invention)

**CPC:** E04F15/02452 E04F15/02464 E04H15/56

**European:** E04F15/024D2 E04F15/024D6 E04H15/56



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR2964993 A1       | 20120323         | FR20100057404      | 20100916         |
| FR2964993 B1       | 20121026         | FR20100057404      | 20100916         |
| WO12035118 A1      | 20120322         | WO2011EP66048      | 20110915         |

#### Priority:

FR20100057404 20100916

**Probable Assignee:** TEMPOLODGE

**Assignee(s):** (std): FREY PASCAL ; GEOLODGE ; MOULIN JEAN FRANCOIS ; TEMPOLODGE

**Inventor(s):** (std): FREY PASCAL ; MOULIN JEAN FRANCOIS

**Inventor(s):** PASCAL FREY ; JEAN FRANCOIS MOULIN

**Agent(s):** BREVINNOV ; COLOMBO MICHEL ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

#### 35) Family number: 51333597 (US2013232886A)

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**Title:** STATIC COMPRESSION BUILDING

**Abstract:** A portable, modular building structure.

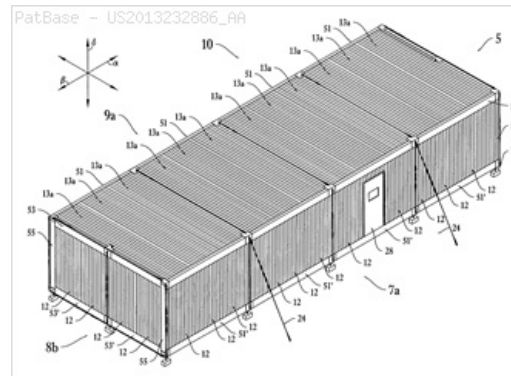
#### Classifications:

**International (IPC 8-9):** E04B1/02 E04B1/343 E04B1/348 E04B1/38 E04B1/58 (Advanced/Invention)

**CPC:** E04B1/34315 E04B2001/3583

**European:** E04B1/343C P04B1/35T

**US:** 52/653.1 52/79.1



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2013232886 AA    | 20130912         | US20130867399      | 20130422         |
| WO12082212 A1      | 20120621         | WO2011US53406      | 20110927         |

#### Priority:

US20100423326P 20101215

WO2011US53406 20110927

US20130867399 20130422

**Probable Assignee:** PERFORMANCE CONTRACTING INC

**Assignee(s):** (std): CARMONA RICHARD ; DELLAGUZZO FRANK ROBERT ; FRISCH JERRY ELDON ; GARNER DANIEL R ; HILLER RORY R ; PERFORMANCE CONTRACTING INC ; YODER STEVEN M ; YODER BART DAVID

**Inventor(s):** (std): CARMONA RICHARD ; DELLAGUZZO FRANK ROBERT ; FRISCH JERRY ELDON ; GARNER DANIEL R ; HILLER RORY R ; YODER BART DAVID ; YODER STEVEN M

**Agent(s):** ISAF LOUIS T ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ

36) Family number: 51706657 (DE202012003817U1)

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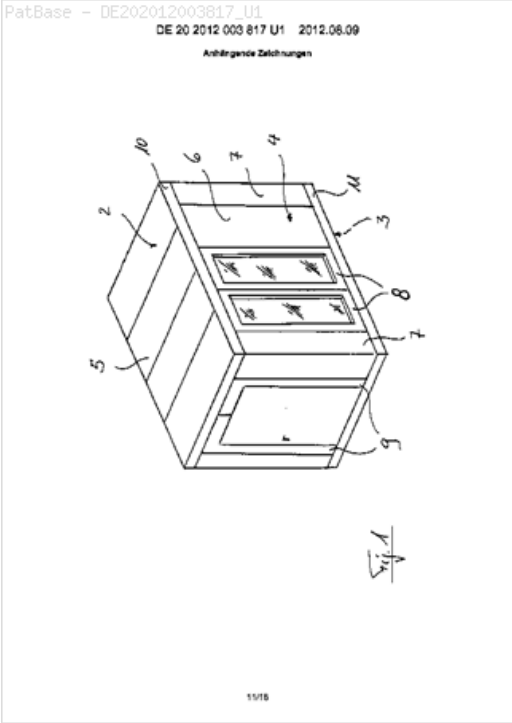
Title: FERTIGTEILSYSTEM FUER EIN RAUM-IN-RAUM-SYSTEM

**Abstract:** Source: DE202012003817U1 [DE] Kassettenartiges Paneel (20) eines Fertigteilsystems zur modularartig aus weitgehend gleichartigen Paneelen (20; 48; 60; 70) aufgebauten Ausbildung eines Wandabschnitts (4), eines Deckenabschnitts (2) oder eines Bodenabschnitts (3) zur Erstellung eines allseitig abgeschlossenen Raums (1), - mit auf flachen Aussenseiten angeordneten Deckschalen (25; 49) und dazwischen eingebettetem Fuellmaterial (26), - mit Anschlussbereichen (21) zur Verbindung mit weitgehend gleichartigen Paneelen nach dem Nut- und Federprinzip zur Ausbildung eines Wandabschnitts (4) oder eines Deckenabschnitts (2) oder eines Bodenabschnitts (3), - mit Seitenflaechen (27) und mit Stirnflaechen (29, 30) der Nut (23) und der Feder (24), und - mit einander gegenueberliegenden Koppelungsbereichen (22) zur Verbindung mit Koppelungsprofilen (10; 11) zur Ausbildung einer Kante zwischen unterschiedlichen Abschnitten (2; 3; 4), dadurch gekennzeichnet, dass die Stirnflaechen (29, 30) der Nut (23) und/oder der Feder (24) zumindest teilweise aus Stahlblech ausgebildet sind.

Classifications:

**International (IPC 8-9):** E04B1/343 E04B1/348 E04B2/08 E04B2/18 E04C2/26 E04C2/292 (Advanced/Invention)

**CPC:** E06B3/24 E04C2/292 E04B1/34321 E04B2/08 E04B2/18



Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT13823 U1         | 20140915         | AT20130050048U     | 20130408         |
| DE202012003817 U1  | 20120809         | DE201220003817U    | 20120417         |
| FR2989397 A3       | 20131018         | FR20130053437      | 20130416         |
| FR2989397 B3       | 20140912         | FR20130053437      | 20130416         |
| ITMI20130135 U1    | 20131018         | IT2013MI00135U     | 20130411         |

Priority:

DE201220003817U 20120417

Probable Assignee:

DUSCHER ANDREAS

Assignee(s): (std):

DUSCHER ANDREAS

Assignee(s):

ANDREAS DUSCHER ; DUSCHER

Inventor(s): (std):

DUSCHER ANDREAS

Inventor(s):

ANDREAS DUSCHER

Agent(s):

CABINET NUSS

37) Family number: 51289816 (GB2489602A)

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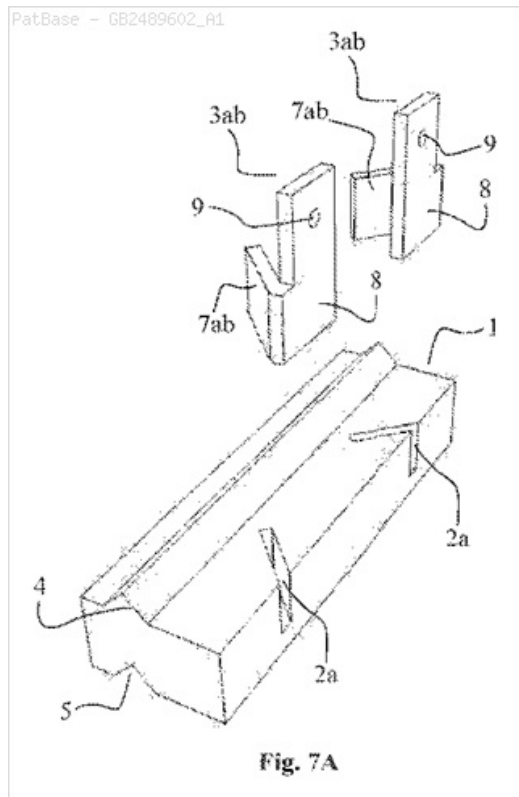
Title: DECORATIVE BLOCKS AND CONNECTING DEVICES FOR ATTACHING SAID BLOCKS TO WALLS

**Abstract:** The decorative blocks comprise a rectangular cuboid brick shape and include at least one sidewall which includes a means 2a, preferably a groove, channel or slot, for receiving a connecting means. In use the side wall may be the rear face of the block which faces the wall being attached to. Also claimed is a block with means for aligning with adjacent blocks above and below the block. The alignment means preferably comprises co-operating oblique surfaces 4 and 5 along length of the top and bottom, in use, of the block. The connecting devices, brackets or braces 3ab have adaptations 7ab to fit into the grooves 2a and preferably have means 9 for attaching the device to a wall. The grooves may come in pairs cut into the top surface of the block and are angled in different directions, for example such that they are perpendicular, orthogonal or at right angles to each other.

Classifications:

**International (IPC 8-9):** E04B2/06 E04B2/46 E04B2/88 E04B2/90

E04C3/04 E04F13/08 E04F13/21 (Advanced/Invention)  
**CPC:** E04B2/06 E04B2/46 E04B2002/0252 E04F13/0805 E04F13/0835  
E04B2/88 E04B2/90  
**European:** E04B2/06 E04B2/46 P04B2/02M3D



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| GB201205659 A0     | 20120516         | GB20120005659      | 20120330         |
| GB2489602 A1       | 20121003         | GB20120005659      | 20120330         |
| GB2489602 B2       | 20150520         | GB20120005659      | 20120330         |
| LU91804 A1         | 20121001         | LU20110091804      | 20110331         |
| RO127668 A0        | 20120730         | RO20120000227      | 20120330         |
| RO127668 A8        | 20150529         | RO20120000227      | 20120330         |
| RO127668 B1        | 20150529         | RO20120000227      | 20120330         |

**Priority:**

LU20110091804 20110331

**Probable Assignee:** DUMITRESCU LIVIA

**Assignee(s):** (std): DUMITRESCU LIVIA ; DUMITRESCU MIHAIL FELIX ; LIVIA DUMITRESCU

**Assignee(s):** MIHAIL FELIX DUMITRESCU

**Inventor(s):** (std): DUMITRESCU LIVIA ; DUMITRESCU MIHAIL FELIX

**Inventor(s):** LIVIA DUMITRESCU ; MIHAIL FELIX DUMITRESCU

**38) Family number: 52165665 (WO12140329A1)**

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**Title:** DEVICE WHICH IS INTENDED FOR FORMING A CAVITY WITHIN A CONSTRUCTION ELEMENT RECEIVING A HANDLING ANCHOR, AND WHICH CAN BE MATCHED TO THE SIZE OF THE ANCHOR

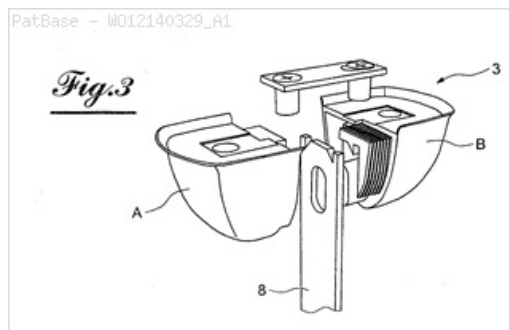
**Abstract:** The invention relates to a device for forming a cavity within a construction element during the molding thereof, said construction element receiving the head of at least one handling anchor (8) of the construction element, and including at least one inner space for receiving the head of the anchor, the inlet of which has a size corresponding to the cross-section of the anchor in the engaged position thereof in the inner space formed by the assembly of two half-buffers (A, B) that are movable between an assembled position for forming the receiving space, and a spaced-apart position for releasing the head of the anchor. According to the invention, the size of the passage inlet is variable and can be matched to anchors having variously sized cross-sections or to multiple anchors. The invention can be used for forming a cavity within a construction element.

**Classifications:**

**International (IPC 8-9):** B28B23/00 E04B1/41 E04G15/04  
E04G21/14 (Advanced/Invention)

**CPC:** E04G21/142 B28B23/0056 E04B1/41 E04G15/04

**European:** B28B23/00T E04G15/04 E04G21/14B

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| WO12140329 A1      | 20121018         | WO2011FR00221      | 20110414         |

**Priority:**

WO2011FR00221 20110414

**Probable Assignee:** ARTEON MARCEL**Assignee(s):** (std): ARTEON MARCEL ; LAPOULE PATRICK**Inventor(s):** (std): LAPOULE PATRICK**Agent(s):** THINAT MICHEL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**39) Family number: 52443921 (WO12160150A1)**

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**Title:** CONCRETE BUILDING BLOCK AND SYSTEM FOR BUILDING A WALL USING SUCH BLOCKS

**Abstract:** A building block has a concrete body (1) comprising two parallel longitudinal walls (11) having upper edges (13) and lower edges (14) situated in parallel jointing planes (P1, P2), and at least two transverse walls (12) connecting the two longitudinal walls. The transverse walls have a protruding part (121) extending beyond a first jointing plane and of which the width, in the transverse direction of the block, is substantially equal to the distance between the internal faces of the longitudinal walls (11). On the opposite side to the protruding part, the transverse walls have a set back part (122), set back from the second jointing plane (P2) by a distance (h2) at least slightly greater than the height (h1) of the protruding part. The upper edges (13) and/or the lower edges (14) of the longitudinal walls (11) are ground down so that the tolerance on the height of the block is less than plus or minus 1 mm. This block is of increased strength in building work, particularly where no mortar is used.

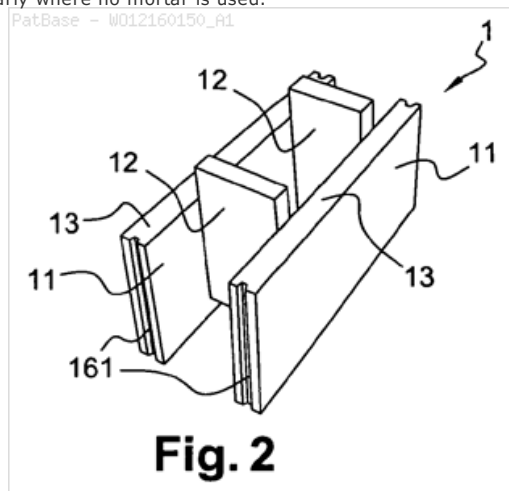
**Classifications:****International (IPC 8-9):** E04B1/76 E04B2/02

E04B2/46 (Advanced/Invention);

E04B2/02 (Advanced/Non-invention)

**CPC:** Y02B30/94 E04B2/46 E04B1/762 E04B2002/0291 E04B2002/0293 Y02A30/261**European:** E04B1/76D E04B2/46 P04B2/02N11A P04B2/02N11B

PatBase - W012160150\_A1

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| LU91818 A1         | 20121126         | LU20110091818      | 20110525         |
| WO12160150 A1      | 20121129         | WO2012EP59739      | 20120524         |

**Priority:**

LU20110091818 20110525

**Probable Assignee:** UNIV LUXEMBOURG**Assignee(s):** (std): UNIV LUXEMBOURG ; WALDMANN DIEDERICH DANIELE**Assignee(s):** DU LUXEMBOURG UNIV ; UNIVERSITE DU LUXEMBOURG**Inventor(s):** (std): WALDMANN DIEDERICH DANIELE**Inventor(s):** DANIELE WALDMANN DIEDERICH

**Agent(s):** OCVIRK PHILIPPE ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**40) Family number: 54293065** (WO13102605A1)

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**Title:** LOST FORMWORK FOR THE PRODUCTION OF VERTICAL WALLS

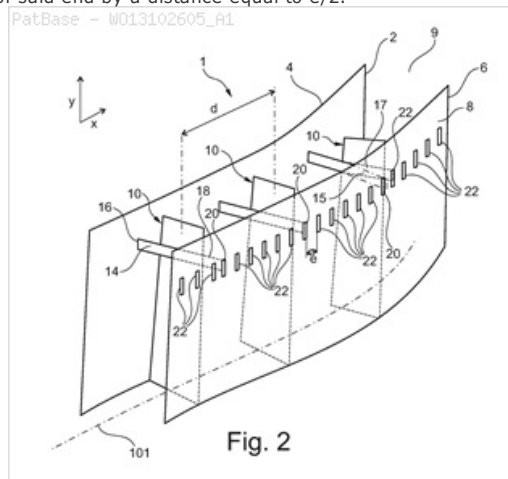
**Abstract:** The invention relates to a lost formwork for the production of vertical walls. According to the invention, additional through-slots (22) are provided in a rear panel (6), on either side of each of the main slots (20) in the horizontal direction, the spacing  $e$  between each main slot (20) and the additional slots (22) provided on either side of the main slots being between 7 and 35 mm. The rear end of each spacer (14) can be moved by hand from a rest position (15), in which the front (16) and rear (18) ends of the spacer are aligned on an axis perpendicular to the front face of the front panel (2), to an offset position (17), in which the rear end (18) is moved horizontally away from the rest position (15) of said end by a distance equal to  $e/2$ .

**Classifications:**

**International (IPC 8-9):** E04B2/86 E04H4/00

E04H4/02 (Advanced/Invention)

**CPC:** E04B2/8611 E04H4/0081



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE602012019831 D1  | 20160804         | DE201260019831T    | 20121228         |
| EP2800843 A1       | 20141112         | EP20120813883      | 20121228         |
| EP2800843 B1       | 20160622         | EP20120813883      | 20121228         |
| ES2594830 T3       | 20161222         | ES20120813883T     | 20121228         |
| FR2985530 A1       | 20130712         | FR20120050166      | 20120106         |
| FR2985530 B1       | 20140207         | FR20120050166      | 20120106         |
| WO13102605 A1      | 20130711         | WO2012EP77008      | 20121228         |

**Priority:**

FR20120050166 20120106 EP20120813883 20121228 WO2012EP77008 20121228

**Probable Assignee:** CHIRTU STEFAN

**Assignee(s):** (std): CHIRTU STEFAN

**Assignee(s):** STEFAN CHIRTU

**Inventor(s):** (std): CHIRTU STEFAN

**Inventor(s):** STEFAN CHIRTU

**Agent(s):** GIE INNOVATION COMPETENCE GROUP; ISERN JORGE; BREVINNOV; COLOMBO MICHEL ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

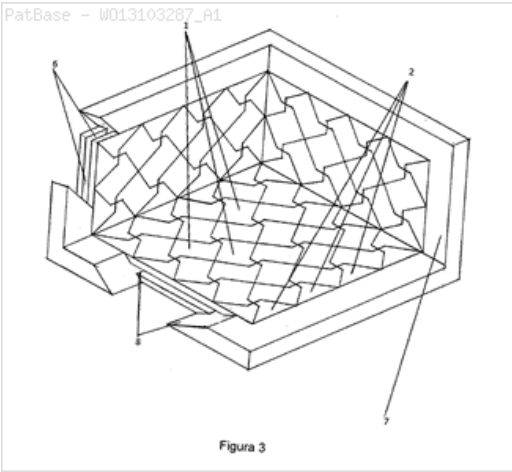
**41) Family number: 54294413** (WO13103287A1)

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**Title:** CONSTRUCTION SYSTEM WHICH CONSISTS OF MULTIPLE-PLANE TESSELLATING POLYHEDRAL BLOCKS WITH OR WITHOUT A HOLLOW CORE FOR BIAXIAL INSTALLATIONS

**Abstract:** The invention relates to a construction system which consists of multiple-plane tessellating polyhedral blocks with or without a hollow core for biaxial installations. The invention has opposing tessellation in each plane (as shown in figure 22) due to which the system provides resistance in the transverse plane; all structures can be derived from the system of blocks, half-blocks, 90 degrees joining blocks and three-plane joining blocks (as in figures 23, 24 and 25). The invention further relates to an inner biaxial duct capable of forming an inner grid inside the structure built using said system on the "x" and "y" axes by rotating the block in the tessellation, such that the block does not need to have more than one duct in order to achieve biaxial ducts. The invention additionally relates to a half-block with a chute arranged on the outside which engages with confinement systems. The blocks can be assembled unequivocally even when rotated on the vertical or horizontal axis thereof on the parts with an even-numbered plane (as shown in figure 10).

**Classifications:**  
**International (IPC 8-9):** E04B2/02 E04B2/22 E04C1/00  
E04C1/39 (Advanced/Invention);  
B27M3/00 (Core/Invention)  
**CPC:** E04B2/12



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| MX2012000020 A1    | 20130712         | MX20120000020      | 20120102         |
| MX344085 B         | 20161202         | MX20120000020      | 20120102         |
| WO13103287 A1      | 20130711         | WO2012MX00132      | 20121218         |

**Priority:**

MX20120000020 20120102

**Probable Assignee:** MARCO ANTONIO SERNA SALDIVAR

**Assignee(s):** (std): MARCO ANTONIO SERNA SALDIVAR ; SALDIVAR MARCO ANTONIO SERNA ; SERNA SALDIVAR MARCO ANTONIO

**Inventor(s):** (std): MARCO ANTONIO SERNA SALDIVAR ; SALDIVAR MARCO ANTONIO SERNA ; SERNA SALDIVAR MARCO ANTONIO

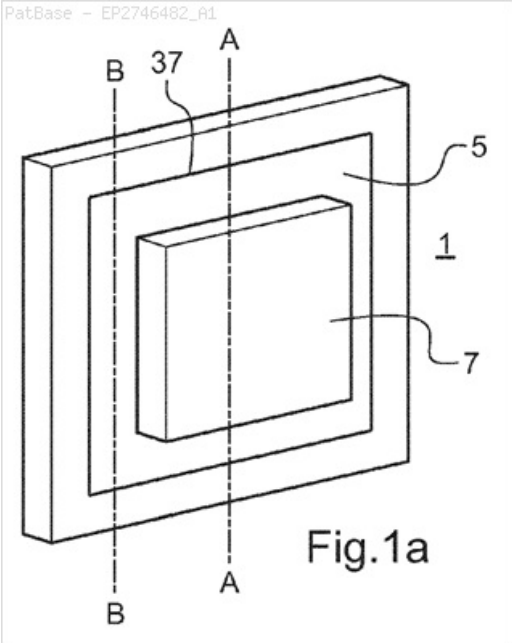
**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**42) Family number: 56771759** (EP2746482B9) © PatBase

**Title:** HEAT INSULATING PRODUCT AND ITS MANUFACTURING PROCESS PRODUIT D'ISOLATION THERMIQUE ET SON PROCEDE DE FABRICATION <

**Abstract:** The product has a vacuum insulating slab (2) and two principal faces (20, 21) that are opposite and parallel to each other. A transverse edge (22) is arranged for connecting the two principal faces by two sides. A peripheral frame (3) is made in a thermally insulator material. Two panels (4, 5) are made of another thermal insulator material that is distinct from the former insulator material. The panels are associated with each of the principal faces by forming two parallel layers on both sides of the principal faces and partly covering the frame. An independent claim is also included for a method for manufacturing a heat insulation product.

**Classifications:**  
**International (IPC 8-9):** E04B1/80 F16L59/02 F16L59/065  
F16L59/10 (Advanced/Invention)  
**CPC:** E04B1/803 Y02B80/12 Y02A30/242



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE602013003466 D1  | 20151126         | DE201360003466T    | 20131218         |
| EP2746482 A1       | 20140625         | EP20130198108      | 20131218         |
| EP2746482 B1       | 20151014         | EP20130198108      | 20131218         |
| EP2746482 B9       | 20160120         | EP20130198108      | 20131218         |
| FR3000117 A1       | 20140627         | FR20120062622      | 20121221         |
| FR3000117 B1       | 20150403         | FR20120062622      | 20121221         |

**Priority:**

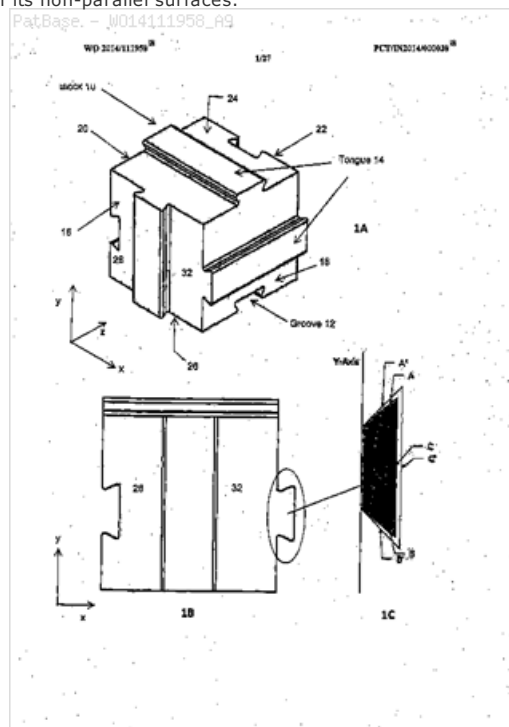
FR20120062622 20121221 EP20130198108 20131218

**Probable Assignee:** SAINT GOBAIN WEBER**Assignee(s):** (std): SAINT GOBAIN WEBER**Inventor(s):** (std): KUBINA LIBOR**Inventor(s):** LIBOR KUBINA**Agent(s):** BOCKHORN AND KOLLEGEN PATENT U RECHTSANWAELTE; DOUYSET LAURENCE; SAINT GOBAIN RECHERCHE**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR**43) Family number: 56964745 (WO14111958A9)**

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**Title:** INTERLOCKING BLOCKS

**Abstract:** The present invention relates to interlocking blocks and more particularly blocks interlocking in all three dimensions without the need for binding agents or support structures. The blocks are capable of forming three dimensionally extendable structures. The blocks of the invention comprise at least one interlocking feature on a plurality of their surfaces characterized in that the block is interlockable with other similar blocks at three or more of its non-parallel surfaces.

**Classifications:****International (IPC 8-9):** E04B2/10 E04B2/16 E04C2/04 E21B (Advanced/Invention)**CPC:** E04B2/08 E04B2/12 E04B2/18 E04B2002/0234 E04B2002/0239 E04B2002/0245 E04C1/397**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| IN00156DE2013 A    | 20140822         | IN2013DE00156      | 20130121         |
| WO14111958 A1      | 20140724         | WO2014IN00038      | 20140120         |
| WO14111958 A9      | 20141023         | WO2014IN00038      | 20140120         |

**Priority:**

IN2013DE00156 20130121

**Probable Assignee:** VINAYAK VENKATARAMAN**Assignee(s):** (std): BANSAL YOGESH ; VENKATARAMAN VINAYAK**Assignee(s):** VINAYAK VENKATARAMAN ; YOGESH BANSAL**Inventor(s):** (std): BANSAL YOGESH ; VENKATARAMAN VINAYAK**Inventor(s):** VINAYAK VENKATARAMAN ; YOGESH BANSAL**Agent(s):** TRIPATHI VISHAL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU

CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN  
IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX  
MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN  
ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

44) Family number: 57133320 (CH707545B)

PatBase

Title: SISTEMA DI ASCIUGATURA DI UN PAVIMENTO. SISTEMA DI ASCIUGATURA DI UN PAVIMENTO.

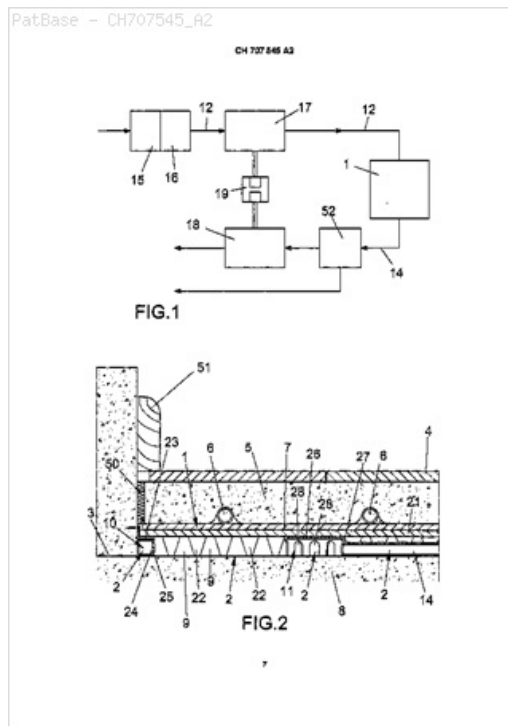
**Abstract:** Source: CH707545B [IT] Il dispositivo di asciugatura di un pavimento prevede una struttura stratiforme posizionabile come strato del pavimento e comprendente una canalizzazione per il convogliamento di aria sul piano di appoggio di detta struttura stratiforme, e mezzi di circolazione forzata dell'aria attraverso detta canalizzazione per l'asportazione di acqua e/o umidità presenti su detto piano di appoggio. [FR] Il dispositivo di asciugatura di un pavimento prevede una struttura stratiforme posizionabile come strato del pavimento e comprendente una canalizzazione per il convogliamento di aria sul piano di appoggio di detta struttura stratiforme, e mezzi di circolazione forzata dell'aria attraverso detta canalizzazione per l'asportazione di acqua e/o umidità presenti su detto piano di appoggio.

**Classifications:**

**International (IPC 8-9):** B32B3/30 E04B1/70 E04B5/48

E04F15/18 (Advanced/Invention)

**CPC:** E04B5/48 E04B1/7092 E04F15/182 E04F15/185



Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CH707545 A2        | 20140731         | CH20130000283      | 20130124         |
| CH707545 B1        | 20161115         | CH20130000283      | 20130124         |

Priority:

CH20130000283 20130124

Probable Assignee:

MARTINO ROMANO

Assignee(s): (std):

MARTINO ROMANO ; ROMANO MARTINO

Inventor(s): (std):

MARTINO ROMANO ; ROMANO MARTINO

45) Family number: 59311328 (DE202014106305U1)

PatBase

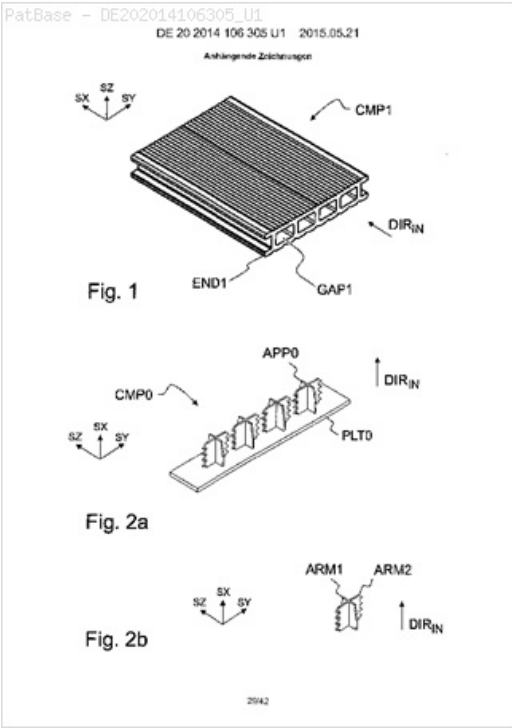
Title: POLYMER-AUFWEISENDES PRODUKT FUER EINE VERRIEGELUNGS-EINDRUECKKUPPLUNG POLYMER exhibiting product for a lock EINDRUECKKUPPLUNG (Machine translation)

**Abstract:** Source: DE202014106305U1 [DE] Polymer-aufweisendes Produkt (PROD14, PROD15), das geeignet ist, zum Ausbilden einer Verriegelungs-Eindrueckkupplung zwischen einer Anzahl zweiter Polymer-aufweisender Produkte (PROD2) mit einer Hohlsektion (GAP1) verwendet zu werden, wobei das Polymer-aufweisende Produkt (PROD14, PROD15) einen Koerper (PLT5, PLT6) aufweist, mit: - zwei Paaren gegenueberliegender Seiten (SURF3a, SURF3b, SURF4a, SURF4b) parallel zu einer Laengsachse (Ax5, Ax6), - wobei die gegenueberliegenden Seiten vier flankierende Seiten des Koerpers ausbilden, - eine der flankierenden Seiten im Wesentlichen senkrecht zu einer benachbarten flankierenden Seite der flankierenden Seiten ist, und - wobei zumindest zwei oder mehrere der flankierenden Seiten jeweils einen oder mehrere Vorspruege (APP2) aufweisen, die sich im Wesentlichen parallel zur Normalen (N3a, N3b, N4a, N4b) der Flaechen der flankierenden Seite (SURF3a, SURF3b, SURF4a, SURF4b), von der sich der Vorsprung (APP2) erstreckt, zu einer Spitze (TIP3) des Vorsprungs (APP2) nach Aussen erstrecken, und - wobei der Vorsprung (APP2) ein oder mehrere Traegererelemente zwischen der Spitze (TIP3) des Vorsprungs (APP2) und der flankierenden Seite aufweist, von der sich der Vorsprung erstreckt, und - wobei die Traegererelemente eingerichtet wurden, als Anschlaege zum Ausrichten einer Befestigungsvorrichtung (NUT2) derart zu wirken, dass, wenn die Befestigungsvorrichtung (NUT2) am Vorsprung (APP2) befestigt ist, die Befestigungsvorrichtung (NUT2) eine erste selbstanziehende Verbindung mit dem Vorsprung (APP2) ausbildet und in einer mit der Normalen (N3a, N3b, N4a, N4b) der flankierenden Seite im Wesentlichen parallelen Einfuehrichtung (DIRIN) ausgerichtet ist. **Machine translation:** Polymer exhibiting product (PROD14, PROD15) which

is adapted to be used to form a lock Eindrueckkupplung between a plurality of second polymer-tasting products (PROD2) having a hollow section (GAP1), said polymer having Product (PROD14, PROD15) having a body (PLT5, PLT6), with: - two pairs of opposite sides (SURF3a, SURF3b, SURF4a, SURF4b) parallel to a longitudinal axis (Ax5, Ax6), - where the opposite sides of four flanking sides of body forming, - one of the flanking sides is substantially perpendicular to an adjacent flanking side of the flanking sides, and - at least two or more of the flanking sides respectively which extend substantially parallel to the normal (N3a one or more projections (APP2), N3b, N4a, N4b) the area of the flanking side (SURF3a, SURF3b, SURF4a, SURF4b), of which extends the projection (APP2) to a tip (TIP3) of the projection (APP2) extend outwards, and - where the projection (APP2) one or more Traegerelemente between the tip (TIP3) of the projection (APP2) and the flanking sides, from which the projection extends, and - wherein the Traegerelemente were set up as stops for aligning a fastening device (NUT2) to act in such a way that when the fastening device (NUT2) on the projection (APP2) is fastened, the fastening device (NUT2) a first self-catching connection with the projection (APP2) forms and in one with the normal (N3a, N3b, N4a, N4b) is oriented substantially parallel to the side flanking the insertion direction (DIRIN).

**Classifications:**

**International (IPC 8-9):** E04B1/58 F16B5/00 (Advanced/Invention)  
**CPC:** A47B47/0008 F16B12/26 E04F15/02038 E04F15/105 E04F2201/0115 E04F2201/0511 E04F2203/04 F16B12/46 F16B5/0614 F16B5/0657 F16B21/075



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| DE202014106305 U1  | 20150521         | DE201420106305U    | 20141230         |

**Priority:**

DE201420106305U 20141230

**Probable Assignee:**

UPM KYMMENE CORP

**Assignee(s):** (std):

UPM KYMMENE CORP

**46) Family number: 60398981 (FR3018530B)**

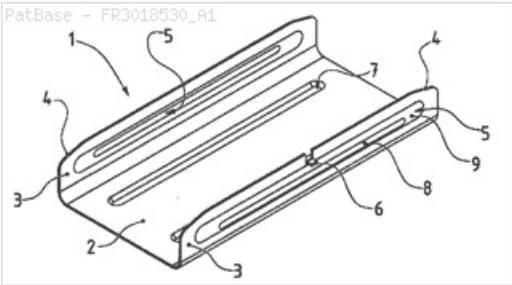
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**Title:** DISPOSITIF D'ECLISSE

**Abstract:** Source: FR3018530A [FR] La presente invention concerne un dispositif d'eclisse (1), constitue d'un corps pourvu d'un fond (2) surmonte sur une meme face de deux bords lateraux (3) s'etendant le long dudit corps, caracterise par le fait qu'une face exterieure d'au moins un desdits bord lateraux (3) presente au moins une saillie (5) s'etendant exterieurement et que ladite saillie (5) presente une inclinaison croissante depuis chaque extremite vers le centre dudit corps. **Machine translation:** The present invention relates to a splint device (1) is a body provided with a base (2) surmounted on a same side of two side edges (3) extending along said body, characterized in that an outer face of at least one of said lateral edge (3) has at least one projection (5) extending outwardly and said projection (5) has an increasing inclination from each end towards the center of said body.

**Classifications:**

**International (IPC 8-9):** E04B1/58 (Advanced/Invention)  
**CPC:** E04B2/789 F16B7/04 E04B9/10



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR3018530 A1       | 20150918         | FR20140052124      | 20140314         |
| FR3018530 B1       | 20160311         | FR20140052124      | 20140314         |

**Priority:**

FR20140052124 20140314

**Probable Assignee:**

NOVOVIS

**Assignee(s):** (std):

NOVOVIS

**Inventor(s):** (std):

FANNIERE DEBORAH

**Inventor(s):**

DEBORAH FANNIERE

**Agent(s):**

CABINET BREV AND SUD

**47) Family number: 62741482 (FR3030590A)**

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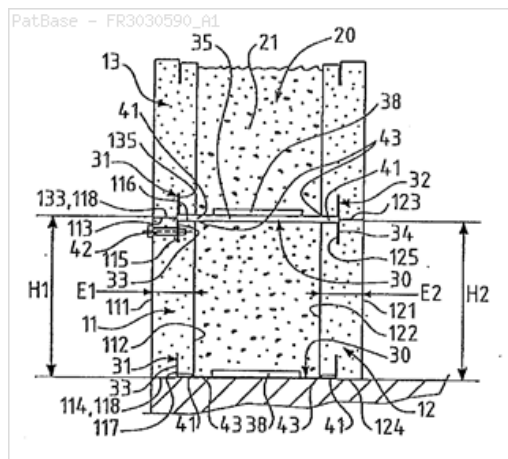
**Title:** SYSTEME ET PROCEDE DE CONSTRUCTION D'UN MUR A ENTRETOISE SYSTEM AND METHOD FOR BUILDING A WALL TO BRACE (Machine translation)

**Abstract:** Source: FR3030590A [FR] - L'invention concerne un systeme de construction comprenant: - un premier panneau mural (11) presentant un premier chant (113), - deuxieme panneau mural (12) presentant un deuxieme chant (123), - une entretoise (30) comprenant: ? une premiere extremite de montage (31) de l'entretoise (30) sur le premier chant (113), et ? une deuxieme extremite de montage (32) de l'entretoise (30) sur le deuxieme chant (123), le systeme de construction etant caracterise en ce que la premiere extremite de montage (31) et le premier chant (113) sont conformes pour former une liaison de montage qui, tout en permettant le maintien du premier panneau mural (11) et du deuxieme panneau mural (12), autorise une course de debatement de l'entretoise (30) le long dudit premier chant (113), de sorte que la position de l'entretoise (30) est regulable selon une infinite de positions. - Matériaux et procedes de construction **Machine translation:** Comprises a system of construction:-a first wall panel (11) presenting a first song (113), - second wall panel (12) presenting a second song (123), a spacer (30) including: ? a first end of mounting spacer on the first song (113) (30) (31), and? a second end of mounting spacer (30) on the second song (123) (32), the system of construction being characterized in that the first end of fitting (31) and the first song (113) are in line to form a bond of editing which, while allowing the maintenance of first wall panel (11) and the second wall panel (12), allows a race of the spacer (30) travel the long said first song (113), so that the position of the spacer (30) is adjustable according to an infinite number of positions. -Materials and methods of construction

**Classifications:**

**International (IPC 8-9):** E04B2/28 E04B2/30 (Advanced/Invention)

**CPC:** E04B2/8652 E04B2002/867 E04H4/0075



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| FR3030590 A1       | 20160624         | FR20140063087      | 20141222         |

**Priority:**

FR20140063087 20141222

**Probable Assignee:**

FELIX JEAN LUC

**Assignee(s):** (std):

FELIX JEAN LUC ; MASSON DAVID

**Assignee(s):**

DAVID MASSON ; JEAN LUC FELIX

**Inventor(s):** (std):

FELIX JEAN LUC ; MASSON DAVID

**Inventor(s):**

DAVID MASSON ; JEAN LUC FELIX

**Agent(s):**

CABINET DIDIER MARTIN

**48) Family number: 62805677 (WO16108025A1)**

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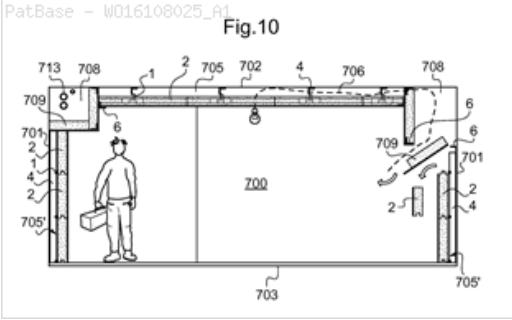
**Title:** INSULATION METHOD, AND CORRESPONDING SUSPENSION MEMBER AND ASSEMBLY

**Abstract:** The present application relates to a suspension member (1), comprising a housing and an attachment lug that are configured such that the suspension member is pivotable so as to engage or disengage with a groove of an insulation panel (2). The present application also relates to an insulating assembly, consisting of at least one first panel (2) and a suspension member (1), and to a method for insulating a wall (701, 702) of a room (700), wherein the suspension member (1) is connected to a structural element (4) then pivoted so as to engage with a rib of the first insulation panel (2). A second panel comprises a groove

which is then capable of fitting around the housing of the suspension member (1).

**Classifications:**

**International (IPC 8-9):** E04B1/74 E04B1/90 E04B9/04 E04B9/18  
E04B9/20 E04B9/28 (Advanced/Invention);  
E04B9/04 (Advanced/Non-invention)  
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| EP3240934 A1       | 20171108         | EP20150837087      | 20151228         |
| FR3031124 A1       | 20160701         | FR20140063461      | 20141230         |
| WO16108025 A1      | 20160707         | WO2015FR53763      | 20151228         |

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