

1) Family number: 70603358 (ES2676910B)

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Title: SISTEMA DE UNION ATORNILLADO DE CANAS DE BAMBU

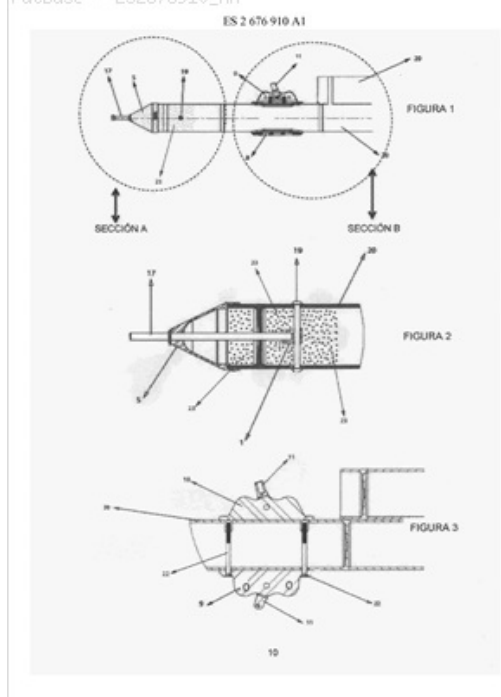
Abstract: Source: ES2676910A [ES] Piezas de union de canas de bambu y procedimiento de montaje consistente en la union de diferentes piezas metalicas atornilladas sobre secciones macizadas de la cana y formando multiples combinaciones entre si, dotando a la invencion de una gran versatilidad para resolver cualquier geometria. Es un sistema novedoso que aporta las caracteristicas de resistencia, durabilidad y ligereza que no aportaban los sistemas tradicionales de union que se han practicado hasta el momento. **Machine translation:** Connecting pieces of bamboo and assembling method consisting of the union of different metal parts macizadas sections of the rod and screwed on forming multiple combinations with each other, giving the invention of great versatility to solve any geometry. It is a novel system which provides the characteristics of strength, durability and lightness not accounted for traditional systems that have been practiced so far.

Classifications:

International (IPC 8-9): E04B1/58 E04C2/16 E04C3/12
F16B7/04 (Advanced/Invention)

CPC: F16B7/044 E04B1/26 E04B1/2604 E04B1/2608 E04B1/58
E04B2001/266 E04B2001/2668 E04B2001/2692 E04C2/16 E04C2/18
E04C3/12 E04C3/125 E04C3/127

PatBase - ES2676910_AA

**Family:**

Publication number	Publication date	Application number	Application date
ES2676910 AA	20180726	ES20170000086	20170125
ES2676910 BA	20190514	ES20170000086	20170125

Priority:

ES20170000086 20170125

Probable Assignee: GRAU SARABIA MARIA DOLORES**Assignee(s):** (std): GRAU SARABIA MARIA DOLORES**Assignee(s):** MARIA DOLORES GRAU SARABIA**Inventor(s):** (std): GRAU SARABIA MARIA DOLORES**Inventor(s):** MARIA DOLORES GRAU SARABIA**2) Family number: 32817708** (CN2761727Y)

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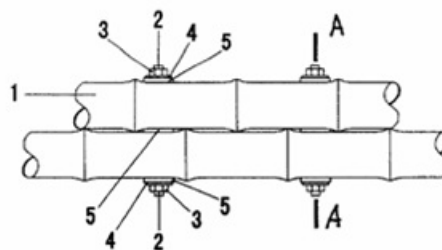
Title: ORIGINAL BAMBOO STRUCTURE NODE USED FOR TAI FAMILY BAMBOO BUILDING

Abstract: The utility model relates to an original bamboo structure node used for Tai family bamboo buildings, which belongs to the technical field of building structures. An anchor rod is arranged in a raw bamboo cavity at a node site, and cement mortar is perfused to form nodes of butt joint, overlapping and the connection of the raw bamboo, a concrete column, or stones, the raw bamboos and a steel component. When shaft lines of each row bamboo at the sites of the butt joint are in the same plane, an anchor bolt and a screw cap are matched and fastened, a metal washer, a rubber gasket and a plastic sleeve pipe are matched and fastened and the row bamboos of the butt joint sites can be provided with a metal hoop. When the shaft lines of each row bamboo at the sites of the butt joint are not in the same plane, the anchor bolt, the screw cap and the washer are matched and fastened, and a pulling strip is arranged between two nodes. Connection nodes between the raw bamboos and the concrete column, and the stones or the steel component have the connection structures that one end of the anchor bolt is fixed on the concrete column, and the other end is directly inserted in the cavity of the row bamboos through a metal cup mouth which is used for supporting one end of the raw bamboos and is perfused by the cement mortar. The utility model has the advantages that water-resistant and insect prevention abilities are strong, cleavage crack resistant ability of the raw bamboos is raised, node materials can be cyclically used and the use of the metal cup mouth enables the reliability and durability of a column base to be raised.

Classifications:

International (IPC 8-9): E04B1/26 E04B1/58 (Advanced/Invention);
E04B1/26 E04B1/58 (Core/Invention)

PatBase - CN2761727_Y



Family:

Publication number	Publication date	Application number	Application date
 CN2761727 Y	20060301	CN200420104503U	20041012

Priority:

CN200420104503U 20041012

Probable Assignee: UNIV KUNMING TECHNOLOGY

Assignee(s): (std): KUNMING UNIV OF SCIENCE AND TECHNOLOGY ; KUNMING UNIV OF TECHNOLOGY ; UNIV KUNMING TECHNOLOGY

Inventor(s): (std): BAI WENFENG ; TANG LETIAN ; YANG YUMING ; YIN ZHONGWEN ; ZENG ZHIHAI

Inventor(s): ZHIHAI ZENG ; ZHONGWEN YIN ; YUMING YANG ; WENFENG BAI ; LETIAN TANG

3) Family number: 44148030 (US2009313926A)

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Title: CONNECTION FOR SANDWICH PANEL AND FOUNDATION

Abstract: A joint connecting a sandwich panel to a foundation comprising, a sandwich panel having a core and two outer layers separated from one another by the core, an anchor in the foundation, a U-shape member having two side walls and a bottom wall extending between the sidewalls, the bottom wall defining an opening that is aligned with the anchor in the foundation and a securing member insertable through the opening in the bottom wall of the U-shape member and engaged to the anchor to secure the U-shape member to the anchor, wherein the U-shape member is connected to the outer layers of the sandwich panel by bonding material between the outer layers of the sandwich panel and the side walls of the U-shape member.

Classifications:

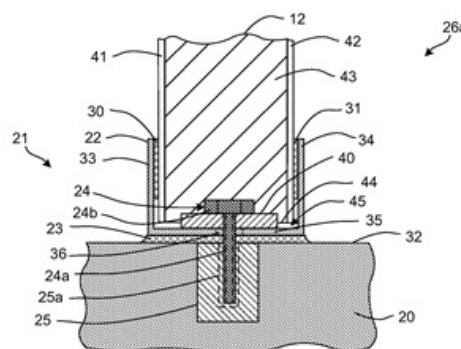
International (IPC 8-9): E04B1/00 E04B2/00 (Advanced/Invention);
E04B1/00 E04B2/00 (Core/Invention)

CPC: E04B1/0007 E04B1/14

European: E04B1/14 P04B1/00B

US: 52/274 52/745.09

PatBase - US2009313926_AA



Family:

Publication number	Publication date	Application number	Application date
 US2009313926 AA	20091224	US20080142865	20080620

Priority:

US20080142865 20080620

Probable Assignee: INNOVIDA FACTORIES LTD

Assignee(s): (std): INNOVIDA FACTORIES LTD

Assignee(s): MILLPORT ASSOCIATES SA

Inventor(s): (std): SCHWARTAU ULRICH

Agent(s): RENNER OTTO BOISSELLE AND SKLAR LLP

4) Family number: 31830240 (WO05035209A3)

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Title: WOOD BAMBOO COMPOSITES

Abstract: The invention relates to novel composites constituted of wood, bamboo, micro/ macro fibre inclusions, reconstituted-bamboo laminates (4) and fillers exhibiting monolithic behaviour under sustained and diverse loading conditions using stress lamination combined with interface irregularities for providing necessary shear resistance and tensile strength. Poor performance resulting from lack of inter fiber bond, splitting, brooming etc has restricted large-scale use of bamboo and small wood as engineering materials. Integrity and monolithic behaviour of the composite is achieved with stress lamination by use of U bolts (3), rods, bands etc in conjunction with designed irregularities such as undulations, serration and indentation with fasteners e.g. clamping plates, dowels. The techniques based on the invention have the potential to utilize small dimensioned wood, bamboo and reconstituted-bamboo laminates (4) to mass produce built up members e.g. beams, girders, trusses, struts, ties, frames, cylinders etc. in engineering structures such as towers, shells, arches, tanks, culverts and bridges.

Classifications:**International (IPC 8-9):** B27L7/00 B27M1/08 B27N3/04 B32B5/28

E04C2/24 E04C2/26 (Advanced/Invention);

B27L7/00 B27M1/00 B27N3/04 B32B5/22 E04C2/10

E04C2/26 (Core/Invention);

B27D (Subclass/Invention)

International (IPC 1-7): B27D B27L7/00 B32B5/28 E04C2/26 F16S**CPC:** B27M1/08 B27N3/04 E04C2/246**European:** B27M1/08 B27N3/04 E04C2/24C

PatBase - W005035209_A2

WO 2005035209

PC/ENGLISH/EN

1/3

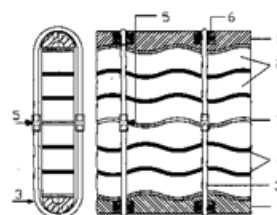


Figure 1

Family:

Publication number	Publication date	Application number	Application date
IN00681MU2003 A	20070629	IN2003MU00681	20030703
IN218488 B	20080509	IN2003MU00681	20030703
WO05035209 A2	20050421	WO2004IN00198	20040705
WO05035209 A3	20050616	WO2004IN00198	20040705
WO05035209 B1	20050811	WO2004IN00198	20040705

Priority:

IN2003MU00681 20030703

Probable Assignee: DATYE KRISHNA RAM**Assignee(s):** (std): DATYE KRISHNA RAM ; GORE VILAS NARAYAN**Assignee(s):** V N GORE**Inventor(s):** (std): DATYE KRISHNA RAM ; GORE VILAS NARAYAN**Inventor(s):** K R DATYE ; V N GORE**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 KZ LC 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**5) Family number: 70158059 (CO20170003136A)**

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Title: SISTEMA DE UNION PARA ARMADO DE ESTRUCTURAS EN GUADUA Connection SYSTEM FOR STRUCTURES IN GUADUA (Machine translation)

Abstract: Source: CO20170003136A [ES] Se relaciona la presente invencion con el ramo de la construccion, particularmente se relaciona, con un sistema comprendido por: i) Un sistema de anclaje metalico con varilla roscada galvanizada, comprendido por los siguientes elementos a) Un tornillo transversal a manera de pasador que transmite el esfuerzo de traccion y se apoya directamente en las paredes de la guadua, b) Un tornillo axial, fijado a un cilindro base guia, de longitud no mayor al diametro de la guadua, ii) Una botella PET (politereftalato de etileno) reutilizable y, iii) Un relleno de mortero, en proporcion 2:1 (arena - cemento). **Machine translation:** The present invention relates to the field of construction, particularly relates to a system comprised of: i) a metal anchoring system with threaded rod galvanized steel, comprised of the following elements (a) by way of a transverse screw pin that transmits the tensile stress and rests directly on the walls of the guadua, (b) an axial screw, attached to a guide cylinder base length is larger than the diameter of the guadua, (ii) a PET (polyethylene terephthalate) reusable bottle and, (iii) a mortar infill, in proportion 2:1 (sand-cement).

Classifications:**International (IPC 8-9):** E04B1/30 E04B1/344

F16B7/08 (Advanced/Invention)

FIGURA 2: Es una vista isométrica del sistema de anclaje embellido en el extremo de una guadua.

FIGURA 3: Es una vista isométrica del sistema de anclaje.

FIGURA 4: Es una vista isométrica parcial de una botella PET.

FIGURA 5: Es una vista en corte longitudinal con el sistema de anclaje embellido en el extremo de una guadua con el relleno de mortero.

FIGURA 6: Es una vista frontal de una guadua con el sistema de anclaje en ambos extremos y con un detalle ampliado que ilustra cómo queda el sistema de anclaje internamente en el extremo de una guadua.

FIGURA 7: Es una vista en despiece con los elementos del sistema de anclaje.

FIGURA 8: Es una vista lateral de la unión.

FIGURA 9: Es una vista superior donde se aprecian los detalles del interior del sistema de anclaje embellido.

DESCRIPCIÓN DETALLADA DE LAS FIGURAS.

FIGURA 1: Es una vista isométrica de un corte longitudinal del sistema de anclaje embellido en el extremo de una guadua (1), allí se ilustra cómo se instala internamente el sistema de anclaje, donde se aprecian las varillas roscadas (2) axial y transversal, con sus respectivas arandelas (5) y tuercas (6); también se observa la botella PET (4) insertada dentro de la guadua (1) y rellena con el mortero (7), una vez fraguado el mortero, queda el extremo de la guadua con la varilla roscada (2) sobresaliente y disponible para ser conectada a cualquier elemento de anclaje por rosca, tal como un anillo multi-unión, una rótula o una placa.

FIGURA 2: Es una vista isométrica del extremo de una guadua que ilustra el resultado final de la instalación del sistema de anclaje, externamente. Con sus elementos visibles numerado de acuerdo con la figura 1.

FIGURA 3: Es una vista isométrica del sistema de anclaje, donde se ilustra las varillas roscadas (2) longitudinal y transversal, donde la transversal pasa por un tubo metálico (3) con sus respectivas tuercas (6); el extremo inferior de la varilla roscada (2) longitudinal, se une interiormente a una tuerca (6).

FIGURA 4: Es una vista isométrica parcial del extremo cónico de una botella PET (4).

Family:

Publication number	Publication date	Application number	Application date
■ CO20170003136 A1	20180410	CO20170003136	20170330

Priority:

CO20170003136 20170330

Probable Assignee: FUNDACION UNIV DE BOGOTA JORGE TADEO LOZANO

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Assignee(s): FUNDACION UNIVERSIDAD DE BOGOTA JORGE TADEO LOZANO

Inventor(s): (std): BENAVIDES CALDERON GERMAN IGNACIO

Inventor(s): GERMAN IGNACIO BENAVIDES CALDERON

Agent(s): JOHAN SEBASTIAN GOMEZ VILLA

6) Family number: 41133054 (BRPI0602074A)

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Title: bambus estruturados com polietileno tereftalato, polietileno, poliestireno, resinas, fibras sintéticas..., com ou sem a utilização de armação estrutural embutida longitudinalmente ao colmo Bamboo structured polyethylene terephthalate, polyethylene, polystyrene resins, synthetic fibers... with or without the use of structural frame built along the stem (Machine translation)

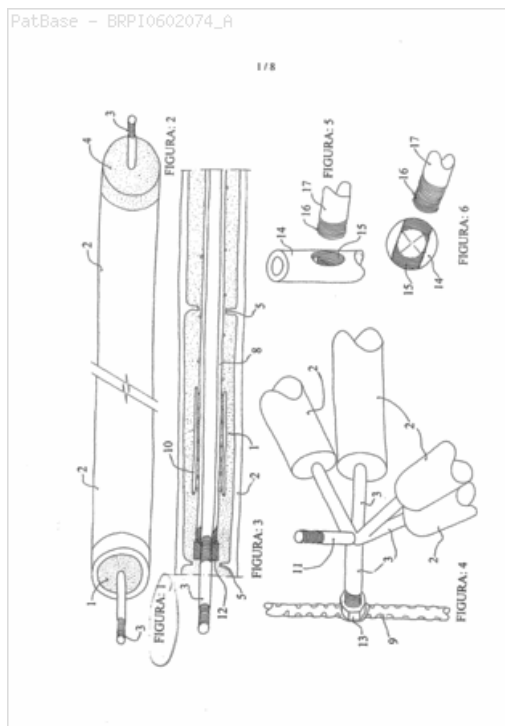
Abstract: Source: BRPI0602074A

Machine translation: STRUCTURES BAMBUSA COM polyethylene terephthalate, polyethylene, polystyrene, resins, synthetic fibers... OU COM SEM A SAUSAGE Estrutural Armação UTILIZACAO longitudinally AO HIGH. Patent privilege request that you turn your bamboo fully um ou macico material nas part two highs royal onde will be focusing instead strive to fixacao. A injeção, for exemplo, polyethylene terephthalate, within two bamboo highs POSSIBILITA to com Terminais execucao of different formats, or becomes possible! You construct buildings and other Structures of Structures as small fossem encaixáveis and desmontáveis LEGOS.

[PT] BAMBUS ESTRUTURADOS COM POLIETILENO TEREFALATO, POLIETILENO, POLIESTIRENO, RESINAS, FIBRAS SINTÉTICAS..., COM OU SEM A UTILIZACAO DE ARMACAO ESTRUTURAL EMBUTIDA LONGITUDINALMENTE AO COLMO. Pedido de privilegio de Patente que visa tornar os bambus um material parcialmente ou totalmente macico nas regioes dos colmos onde se concentram os esforcos de fixacao. A injeção, por exemplo, de polietileno tereftalato, dentro dos colmos de bambus possibilita a execucao de terminais com diversos formatos, o que torna possivel construirmos estruturas de mobiliarios e pequenas estruturas como se fossem LEGOS encaixáveis e desmontáveis.

Classifications:

International (IPC 8-9): B29D24/00 (Advanced/Invention); B29D24/00 (Core/Invention)

**Family:**

Publication number	Publication date	Application number	Application date
BRPI0602074 A	20080115	BR2006PI02074	20060523

Priority:

BR2006PI02074 20060523

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CARLOS AUGUSTO CAVALCANTI LOUREIRO