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(54) WOOD BUILDING SYSTEM

(57) It is a wood building system that has a high strength against moisture, heat, sound, that is compatible with human health, ecological structure and balance of nature, that has the ability to keep out of structure without harming pests and animals, that can be quickly installed by the end user without requiring technical equipment and expertise, that does not require additional parts, tools, materials for installation, that can be disassembled

and installed countless times/moved to another area and surface, that has physical or architectural features that can be changed according to the initiative and preference of the user, that is long-lasting, consisting of all different types and snap-on and locked wood elements, that is blocky, that is filled with hemp stems (11) as insulation material to block spaces.

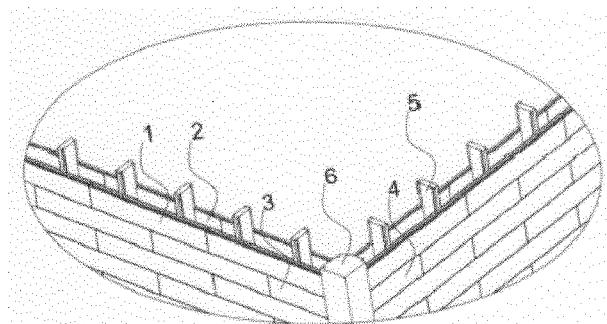


FIGURE 1.a

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Description

TECHNICAL FIELD

[0001] The present invention relates to the establishment of building systems for the rapid and modular creation of structures that are suitable for nature, human and animal health, at low cost, in order to create the indoor environments that people and other living things need to carry out their shelter, accommodation and life activities.

PRIOR ART

[0002] The "need for shelter" is the basis of the physical needs at the base of the pyramid that describes the theorem in the hierarchy of human needs according to a theory of behavioral science put forward by American psychologist Abraham Maslow in 1943 and subsequently developed. Accordingly, it has been eliminated by diversifying according to the conditions specific to the period in which there was a need for shelter from the first person to the present day. Following the transition to the permanent settlement, human beings diversified the structures they built for "shelter" in line with their personal and social needs and this structural change gained a wide range with the effect of geographical and climatic differences in line with the developing technology and material knowledge. Mainly reinforced concrete structures are used for the need for shelter in today's conditions. However, concrete is tried to be removed as a material in construction and concrete is considered as an element of 'ugly construction' due to factors such as global climate change, increase in human population, and weaknesses in the resistance to ground movements. In addition, concrete structures are not preferred in natural environments where concrete construction is not in question and where the settlement is not opened, in order not to disrupt the structure of the natural environment as much as possible, and even such constructions are prohibited by legislation and administrative practices. There is a demand for wood buildings that are compatible with nature and do not harm the environment in order to meet the need for shelter, and this trend increases day by day especially in human communities that want to avoid the negative effects of city life and construction (concrete) on human health. In particular, the pandemic that has emerged globally in recent years have led to the need for people to turn to nature more intensively due to global warming due to climate change. In fact, country administrations have taken measures throughout the country to ensure that people "stay at home" due to diseases that have a global impact, and with these decisions, actual work in the workplaces has been stopped, people have been forced to live in isolation, and they have been directed to their homes even to work, The individuals who had the opportunity preferred to move away from the mass and intense living spaces and turned to the independent residential areas

as a result of this. They focused on natural habitats in their preferences in order to eliminate the effect of the negativities that cause this orientation. Our invention is designed to create an alternative to common housing structures where people have to spend intense time in their daily lives. Reinforced concrete structures are essentially produced with a system made of cement, limestone and clay, in which clinker produced with auxiliary materials such as iron ore, bauxite, sand etc, is used. These materials are taken from their natural environments by the quarry operation method, It is known that iron, brick, paint, tile, ceramic, adhesive chemicals are used in reinforced concrete structures other than concrete and cement. In addition, these structures are relatively unstable and short-lived against natural events; climatic effects, fire, tectonic movements and radioactivity. In addition, the "operating cost" of these structures is relatively high and requires maintenance and repair as they are used, and as such, they impose financial burdens on the user.

[0003] The other building system that human beings use when they need a structure to meet their basic needs is "steel construction". The material used in this type of structure is steel. Steel is obtained by melting the equivalent scrap materials in the casting crucible together with other alloy elements (C, Mn, P, S, Cu) or by enriching the iron ore extracted from the mines with carbon and forming an alloy by incorporating the same elements (Mn, P, S, Cu) in certain proportions. St-37, St-44 and St-52 versions of the structural steels obtained as a result of this alloy and named according to the DIN 17100 standard are the most commonly used structural steels. Although the structures manufactured with semi-finished steel material are more resistant to tectonic movements than their substitutes, they create disadvantages in terms of offering natural habitat, disrupt the ecological balance, have high radioactivity and create high costs both during the manufacturing and operation stages. Steel structures are preferred more in industrial structures, especially instead of meeting people's housing needs for these reasons.

[0004] "Wood material" is also preferred in structural systems as an alternative to the disadvantages for "concrete and steel" mentioned above. Humans have used wood as the basic material in building since the historical process in which the need for shelter arose. The first people to meet the need for shelter in caves started to use the masonry stone method in the construction of the building due to the increasing needs in parallel with the increase in the human population, and then the wood building materials, which are more advantageous in terms of ease of construction and comfort of use.

[0005] Professional branches have developed in the society due to people's turning to different business lines and specialties with industrialization. People turned to different business lines and lost most of their basic vital functions (hunting, agriculture, sewing, gathering, etc.), which are a collective ability as a result of this branching,

and these areas continued as a special field of activity for a small part of the society, in this direction, "building construction" emerged as a separate field of expertise, and wood building construction was defined as a craft and emerged as a quality unique to a smaller part of the society compared to those engaged in steel and concrete structure construction. Today, wood buildings are produced as a result of a process that requires intense and high expertise, personal handicraft, skill and labor. For this reason, although people show great interest in wood buildings, they cannot benefit from wood buildings and have the opportunity to have these structures in the face of the difficulty of the process and the scarcity of people working in this field and having this competence.

[0006] Our invention has been put forward in order to ensure that all people who want to use wood buildings can access these structures. The fact that our invention is modular, consists of small parts and lightweight material, easy and cost-free transportation with the help of pallets, and can be mounted with a snap-lock system, and the end user can assemble without the need for special training provides the opportunity to be extremely useful and profitable, There are columns and beams made entirely of wood material, as well as wood bricks, door and window frames, lock wedges for the production of the building to be built in our invention. The elements of wood bricks and wood lock wedges are connected to each other with a snap-lock system without any additional installation material and the intermediate space of our wood bricks, which constitute another basic difference of our structure, is filled with special and again completely natural hemp stem filling material,

[0007] Even though there is no similar system that is currently produced in the actual world construction market and is the subject of trade and the products subject to the registration certificate that we will mention are not actually manufactured, there are at least the following products that are in the same field of activity as our intellectual product.

[0008] We would like to compare these products with the building system of our application as a result of the research we conducted on Turkish Patent and Trademark Office.

a- National utility model application No. 2011/06879:

The product subject to this application is defined as "a wood brick with wood plaster" and in the abstract of the invention, it is stated that "it comprises wood plaster mortar containing chips obtained from the shells of shelled foods, wood chips and mortar chips obtained from the fibers and adhesive mixed with said chip, and wood brick obtained with said wood plaster mortar".

Even though wood bricks and sawdust that can be associated with the elements in our product are mentioned in this product, while the men-

tioned wood bricks are manufactured from wood sawdust and fibers, the mixture is provided by mixing with adhesive. However, the wood wall is manufactured by machining from the timber of trees such as fir, spruce, scotch pine, etc. without using any other material in our product, and there is a wall structure that forms an integrated brick system by filling the space created in the wall with hemp stem.

In addition, while the wood bricks formed by compressing the sawdust with chemical adhesive in this product are combined with fasteners made of metal-based material, snap-on and locked wood wedges are used in our product.

If it is necessary to compare two products in the face of these differences, there is a disadvantage compared to our product in terms of labor, production and assembly time in the manufacturing process of the said product. In addition, our product, which does not require any adhesive due to the use of chemicals in the said product, provides a much healthier and environmentally friendly structure service to the user.

b- In the national utility model application No. 2013/10888;

The invention, which is called "wood brick wall system", "is related to wood brick wall system that can be used in wood buildings made of wood, wood buildings made of processed log, wood brick system that can be used in wood buildings made by hammering materials in different models on a wood carcass, characterized in that it consists of wood brick with an insulation plate such as styrofoam (foam), polyurethane, eps, etc. interconnection piece placed between the wood bricks positioned vertical on top of each other, and locking parts that lock (connect) the wood bricks arranged consecutively (side by side) on the interconnection piece from front and back surfaces,"

In this product, even though wood bricks are made of wood material like our product, insulation plates such as styrofoam, polyurethane, eps, etc. are placed inside the bricks and the bricks are mounted together with interconnection parts. However, the insulation material placed inside the wood walls consists of completely natural hemp stem and wood snap-on and locked wood wedges are used as the interconnection part in our product, Insulation materials, in the aforementioned product are of chemical nature and they cause partial disappearance of the characteristics of the tree and pre-

vent the tree from breathing air. However, the filling material in our product has a natural quality that allows the tree to breathe and provides moisture balance and prolongs life.

In addition, due to the geometric form and assembly form of the interconnection part used in this product, the static strength values in the multi-storey structures are created in a way that they will result in low date compared to our product as can be detected even with an uninformed person observation on the paintings,

c- In the patent application No. 2014/04823;

With the title of "wood brick", the process was carried out for "wood brick used in the construction of walls and/or side walls in residential (apartment, house, etc.) constructions, offering advantages such as sound, heat insulation, hygiene, light specific weight, etc. with its natural structure" but the document became invalid because no annual fee was paid.

In this product, wood bricks do not have any filling material, and the recesses and protrusions that allow the bricks to intertwine have a quality that will result in extremely weak structural strength and be suitable for the emergence of destruction that will be harmful to human health. It would not be possible to mention that this type of connection is a locked system.

However, in our product, hemp stem filling, which is natural and has many advantages, is applied to the spaces between the wood walls and snap-on and locked wood wedges are used with the methods that will ensure the maximum safety of the structure, thus our structure has high strength and protection against all kinds of effects.

Since the wood bricks used in the aforementioned product are monolithic, their cost is high. However, in the application of our product, there is a quality that is more economical and provides insulation advantage since it is produced by using filling material between two separate wood wall parts (1-2-3-4), A similar method is also used in double-walled, gas-filled glasses with high heat efficiency. This method has proven to be effective in terms of heat cost performance and is widely used.

d- In the national utility model application No. 2020/03437;

In the invention defined with the title of "wood

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building carcass system", "wood building carcass system in modular structure applied for wood construction assembly purposes in wood building production" has been taken under protection and this product is different from our product with the following features.

The variety of parts is high and the wood building is a carcass system in this product. However, our product is a wood wailed system. The assembly time is long and requires mastery since the product variety is high in the aforementioned product. The variety of parts is much more limited and there is assembly practicality in our wood wall building system. In addition, there is no insulation filter material in this product,

e- In the product protected with the national utility model application No. 2020/20005; With the title 'locked wall structuring", it is related to "the locked wall structuring that has female and male edges made of wood material, easily lockable to each other, that is pallet portable, that has design preventing wind and rain from entering the interior when the wall is formed, that has double wall design and of which all corner turns that are heat insulated between them and allow electrical and water installations to work together are ready, allowing installation without cutting.

Even though the wood brick form in the aforementioned product and the part form (1-2-3-4) forming the wood walls in our product are the same, the wood lock wedge in our product allows to lock the brick parts (1-2-3-4) vertically along the wall (1-2-3-4), while the panel locking plastic. apparatus in the aforementioned product connects the bricks separately and the apparatus has a chemical nature, This system also has a weak strength disadvantage compared to our product. In the aforementioned system, with the plastic connection apparatus, wood bricks, both the fact that the tree is a working material and the fact that it is formed in the structure during its lifetime, there will be an adaptation problem as a result of the evolution with the inevitable heat and external properties and there will be no simultaneous and harmonious change between the parts.

There is also a difference between the two systems as filling material In other words, while stone wool or parlite is used as filling material in the aforementioned system, compared to the fact that hemp stem is used in our system, stone wool or perlite disrupt the naturalness of the structure since they are not natural materials and causes decay in time by preventing the

wood from breathing and damages the structure.

In addition, corner blocks are used in the wall turns in the aforementioned product, and a wide variety of parts that are not suitable for pallet transportation, that is, they do not facilitate transportation and shipment, are manufactured for these corner blocks. However, our columns (6), which provide four-way strength along the wall height for wall corner turns, are produced in one piece in our product. This provides strength with ease of transportation, loading and assembly.

f- In the utility model application No. 2021/002786; The product is not a wood brick in the document with the title "module design and production to produce structures with ecological natural materials", including the definition "ecological, human and nature friendly buildings or structures are created that can be considered as modern version of historical log houses (Wood House + Straw House combination), by combining in the structure drawn in the architectural project the modules obtained by compressing with high pressure while filling natural grain or other plant stalks-straws into wood frame or the frame or module formed by using steel, profile, pvc, etc. material. Using these modules, the structures such as VILLA, residence, hobby house, mountain house, building, warehouse, workplace, etc. can be built up to five floors." In this system, a carcass structure is mentioned Even though the natural insulation method is similar to our product, the product is completely different from the product subject to our application in that it does not include a locked building system and a wood brick system. In addition, this system has a great disadvantage in terms of production and cost, and it does not have a feature that will appeal to the user.

g- In the patent application No. 2021/005165 With the definition of "practical structure system compatible with nature", it is defined as "it contains at least one mountable and disassembleable skeleton system, at least one reflective mirrored glass panel covering at least one surface of said skeleton system and at least one wall panel covering at least one surface thereof, composite insulation plate and organic insulation plate positioned between said wall panel and said wood and providing heat and sound insulation, at least one bottom floor panel dressed on the bottom floor of said skeleton system, ceiling top insulation panel placed on the ceiling of said skeleton system, ceiling sandwich panel placed on said ceiling top insulation panel and roof panel placed on said ceiling sandwich panel". There is a steel frame and it is manufactured with wood wall panels in the building system included in this definition. However,

there is no steel product and a wood part (1-2-3-4) system in the form of bricks is used instead of panels in our product. In addition, composite insulation plate is used for insulation and it is not possible to mention that the building is natural and environmentally friendly in general. It is also not possible to say that the structure, which requires expertise for its installation, is user-friendly according to our structure.

10 **[0009]** All the problems mentioned above have made it necessary to make an innovation in the relevant technical field as a result.

BRIEF DESCRIPTION OF THE INVENTION

15 **[0010]** The present invention relates to a wood building system in order to eliminate the above-mentioned disadvantages and to bring new advantages to the related technical field.

20 **[0011]** It is aimed to manufacture natural buildings that are environmentally friendly and suitable for ecological structure with the wood building system, which is the subject of the invention. Our structure, which does not contain concrete, mineral compounds, chemical elements, cement, iron, etc. in wood brick wood wall pieces (1-2-3-4) elements and wood lock wedge elements, has the quality of providing an accessible and isolated living space that does not harm the environment and offers long-term residence as a step in the fight against global climate change.

25 **[0012]** The wood building system, which is the subject of the invention, has thermal insulation and soundproofing properties in terms of its production type and material. Thanks to these features, energy efficiency and user comfort are provided, and as a multiplier effect of these features, the use of buildings provides an economic operation for the user and a supportive and solution-generating quality for many global problems is presented by providing social benefits.

30 **[0013]** The wood building system subject to the invention is modular, wood brick wall parts (1-2-3-4) and wood lock wedge elements can be mounted on all facade and interior partition walls of the building without using any additional material and is a practical and light product that will provide easy transportation and shipment as well as ensuring that users can install easily and quickly without any expertise. Based on these results, the price at which the product is offered to the user makes the product accessible and provides a much more advantageous position compared to other alternative structures since it does not require additional costs.

35 **[0014]** Since the raw materials in which the wood building system is manufactured are completely natural wood and hemp products, the raw material industry required for the production of the product serves to create an environmentally sensitive system that encourages raw material producers to agricultural production and forestry and prioritizes the protection of nature, not to stone or

mining, which is harmful to the environment and causes ecological destruction. Industrial hemp, which we use in product insulation, is also one of the rare plants that feeds the soil while cleaning the air and is considered to be the only natural resource in this sense; it can be grown in unfavorable soils and swamp regions, which have a field of use from books to shampoo and automotive industry. Hemp roots sprouting in the depths of the soil feed the soil, and unlike cotton, which has a harvest casualty of close to 50%, it is a product with zero casualties. There is also a high contribution to the agricultural economy of Turkey thanks to the use of hemp stems provided by grinding the waste woody structure of the hemp plant, which has high incentives for the production of Turkey's agricultural policies and is produced by providing seeds specific to Turkey.

[0015] The wood building system, which is the subject of the invention, is mounted with a snap-lock wood wedge system and has a high resistance and durability against tectonic floor movements, as well as its stretching feature, and therefore it does not collapse. In addition, the use of water-based organic paint in our product does not reflect the factors such as flame-fire coming from the outside and shows high resistance to fire thanks to the fact that the hemp stem (11) is filled in the space between the double-walled inner and outer brick wood wall structure in an airtight manner. However, if the building is exposed to an unusual and persistent fire, it does not completely collapse thanks to the existing locked joint system, but the burning part is destroyed and the combined parts continue to be intact and standing, thus enabling the user to maximize safety and escape. Since products that emit chemical toxic gases are not used at any point in our structure, there is no gas release that may cause respiratory danger to the living beings in the structure when exposed to any fire. In addition, the structure that does not transmit electrical current due to its wood and insulating nature ensures that the safe living space feature is provided by preventing the user from being damaged by being caught in the current if there is any leakage current. In addition, our structure, which is made of wood and created with the manufacturing method that will allow the building elements to breathe, offers a healthy living environment to the people to be housed in the structure, since it is resistant to moisture, humidity and mold without the need for any external insulation in natural environments, unlike reinforced concrete structures. In addition, as a feature of hemp stem, it maximizes the comfort of individuals by supporting the needs of a healthy living environment by keeping pests and insects away from the structure.

[0016] Our structure, which consists of light and practical small parts compared to heavy and intensive work-force substitutes in the form of reinforced concrete and steel construction, has the ease of use, assembly and application that minimizes the occurrence of occupational accidents during the production phase. For this reason, it is aimed and achieved to eliminate the possibility of

occurrence of any adverse event that may harm the health of the users during both transportation, shipment and assembly.

[0017] Thanks to the wood building system, which is the subject of the invention, it will be possible for people to reach a peaceful accommodation option with free, fast, environmentally friendly, zoning and settlement legislation in line with their wishes and desires by ensuring that the drawbacks are completely eliminated in the regions where people cannot find shelter.

BRIEF DESCRIPTION OF THE FIGURES

[0018]

Figure-1 shows the perspective view of the connections of the wood wall with the column (6), door and window frames (7-8-9-10).

Figure-1.a shows the close perspective view of the connections of the wood wall with column (6) and lock wedges (5).

Figure-2 shows the front view of the right full-length part of the wood wall (1).

Figure-2.a shows the side view of the right full-length part of the wood wall (1),

Figure-2.b shows the upper view of the right full-length part of the wood wall (1).

Figure-2.c shows the anterior isometric view of right full-length part of the wood wall (1).

Figure-2.d shows the rear isometric view of the light full-length part of the wood wall (1).

Figure-3 shows the view of the left full length part of the wood wall (2).

Figure-3.a shows the side view of the left full length part of the wood wall (2).

Figure-3.b shows the upper view of the left full length part of the wood wall (2).

Figure-3.c shows the anterior isometric view of the left full length part of the wood wall (2).

Figure-3.d shows the rear isometric view of the left full length part of the wood wall (2).

Figure-4 shows the view of the right half-length part of the wood wall (3).

Figure-4.a shows the side view of the right half-length part of the wood wall (3) is given.

Figure-4.b shows the upper view of the right half-length part of the wood wall (3).

Figure-4.c shows the front isometric view of the right half-length part of the wood wall (3).

Figure-4.d shows the rear isometric view of the right half-length part (3).

Figure-5 shows the view of the left half-length part of the wood wall (4).

Figure-5.a shows the side view of the left half-length part of the wood wall (4).

Figure-5.b shows the upper view of the left half-length part of the wood wall (4),

Figure-5.c shows the anterior isometric view of the

left half-length part of the wood wall (4).

Figure-5.d shows the rear isometric view of the left half-length part of the wood wall (4).

Figure-6 shows the front view of the lock wedge of the wood wall (5).

Figure-6.a shows the side view of the lock wedge of the wood wall (5).

Figure-6.b shows the upper view of the lock wedge of the wood wall (5).

Figure-7 shows the column section view of the wood wall (6).

Figure-8 shows the door frame view of the wood wall (7-9-10).

Figure-8.a shows the upper view of the door frame of the wood wall (7-9-10).

Figure-8.b shows the isometric view of the door frame of the wood wall (7-9-10),

Figure-8.c shows the lower view of the door frame of the wood wall (7-9-10).

Figure-9 shows the window frame view of the wood wall (7-8-9-10).

Figure-9.a shows the side view of the window frame of the wood wall (7-8-9-10).

Figure-9.b shows, the upper view of the window frame of the wood wall (7-8-9-10).

Figure-9.c shows the tower view of the window frame of the wood wall (7-8-9-10),

Figure-9.d shows the isometric view of the window frame of the wood wall (7-8-9-10).

Figure-10 shows the perspective view of the form of the wood wall where the hemp stem (11), which is the insulation filling.

DETAILED DESCRIPTION OF THE INVENTION

[0019] The subject of the invention is explained with examples that do not have any limiting effect only for a better understanding of the subject in this detailed description.

[0020] Referring to Figures-1-10, the invention relates to a wood building system. In nature, they are raw material types with high physical and mechanical properties such as fir, spruce, and scotch pine. Among these tree species that are not endangered in industrial forestry, timber is produced from logs obtained as a result of the usual cutting to ensure forest health and development. From the timber obtained, the right full-length part of the wood wall (1), the left full length part of the wood wall (2), the right half-length part of the wood wall (3), the left half-length part of the wood wall (4), the lock wedge of the wood wall (5), the column of the wood wall (6), the door and window frame left part of the wood wall (7), the lower part of the window and door frame of the wood wall (8), the upper part of the door and window frame of the wood wall (9), the right part of the door and window frame of the wood wall (10) in Figure-1 are cut. The right parts of the wood wall are measured as full length (1) and half-length (3), and the left parts of the wood wall are meas-

ured as full length (2) and half-length (4). The right full-length part of the wood wall (1) as shown in Figure-2, the left full length part of the wood wall (2) as shown in Figure-3, the right half-length part of the wood wall (3) as shown in Figure-4, the joint forms with the locking wedge (5.1) (1.1) to the left half-length part of the wood wall (4) as shown in Figure-5, horizontal fitting groove of the part (1.2), horizontal fitting protrusion of the part (1.3), the vertical fitting protrusion of the part (1.4) and the vertical fitting groove of the part (1.5) are opened. Subsequently, as shown in Figure-6, the lock wedge of the wood wall (5) is produced by cutting the right full-length part of the wood wall (1), the left full length part of the wood wall (2), the right half-length part of the wood wall (3), the left half-length part of the wood wall (4), and the channels are opened in a way that the lock wedge and joint forms (5.1) with the lock wedge of the wood wall (5). Subsequently, the column of the wood wall (6) is manufactured and joint channel of the column with the horizontal fitting groove of the right full-length part of the wood wall (1) (6.1) and the joint channel with the horizontal fitting protrusion of the part (1.3) of the right full-length part of the wood wall (1) (6.2) are opened to this column (6). While door and window frame left part of the wood wall (7), the upper part of the door and window frame of the wood wall (9) and the right part of the door and window frame of the wood wall (10) are joined, the joint channel of the door and window frame with the horizontal fitting protrusion of the part (1.3) of the right full-length part of the wood wall (1) (7.1) is opened in the vertical direction and on both sides to the door and window frame left part of the wood wall (7) before installation. The joint channel of the door and window frame with the horizontal fitting groove of the right full-length part of the wood wall (1) (10.1) is also opened before the installation to edges of the right part of the door and window frame of the wood wall (10). To the edges of the upper part of the door and window frame of the wood wall (9), the joint channel of the door and window frame with the vertical fitting groove of the part (1.5) of the right full-length part of the wood wall (1) (9.1) before installation. The window frame is formed by combining the left part of the door and window frame left part of the wood wall (7), the lower part of the window and door frame of the wood wall (8), the upper part of the door and window frame of the wood wall (9) and the right part of the door and window frame of the wood wall (10). **[0021]** Before joining, the joint channel of the door and window frame with the horizontal fitting protrusion of the part (1.3) of the right full-length part of the wood wall (1) (7.1) for the door and window frame left part of the wood wall (7), the joint channels of the window frame with the vertical fitting protrusion of the part (1.4) of the right full-length part of the wood wall (1) and the joint channels of the door and window frame with the horizontal fitting groove of the part (1.2) of the right full-length part of the wood wall (1) (10.1) for the the lower part of the window and door frame of the wood wall (8), the joint channels of the window frame of the wood wall with the vertical

fitting protrusion of the part (1.4) of the right full-length part of the wood wall (1) (8.1) and for the the upper part of the door and window frame of the wood wall (9) and the joint channel of the door and window frame with vertical fitting groove of the part (1.5) of the right full-length part of the wood wall (1) (9.1) are opened and then all parts are combined. When the wall is mounted, that is, the structure is formed, the desired size of the upper part of the door and window frame of the wood wall (9) is positioned on the subassembly foundation made of all kinds of materials (concrete, steel, wood), which will be formed according to the consumer's preference. to be compatible with the preferred dimensions of the structure. At the ends of this piece, the columns (6) are placed vertically to form the building corners. As a result of this placement, the structure gains a square form. The upper part of the door and window frame of the wood wall (9) that will form the floor of the side walls of the building, the door and the joint channels with the vertical fitting groove of the part (1.5) (9.1) of the right full-length part of the wood wall (1), the vertical fitting groove of the part (1.5) of the right full-length part of the wood wall (1) and the channels of the left full length part of the wood wall (2) are placed in a way that they enter mutually. The joint forms of the lock wedge of the wood wall (5) (5.1) are then fixed by inserting the right full-length part of the wood wall (1) and the left full length part of the wood wall (2) such that joint forms with the lock wedge (5.1) (1.1) are entered into the channels. In order to advance the wall in the horizontal direction, the right full-length part of the wood wall (1) is joined to the horizontal fitting protrusion of the part (1.3) and fixed to the horizontal fitting groove of the part (1.2) of the right full-length part of the wood wall (1). The same process, is repeated by joining the left full length part of the wood wall (2) to the horizontal fitting protrusion of the part (1.3) so that the horizontal fitting groove of the part (1.2) fits. Then, the joint forms of the lock wedge of the wood wall (5) (5.1) are fixed vertically to the joint forms (1.1) with the lock wedge of the right full-length part of the wood wall (1) from the top. These operations are repeated until the entire wall reaches the desired length, When the wall corner reaches the desired length, the right half-length part of the wood wall (3) is placed to join the horizontal fitting groove of the part (1.2) and the horizontal fitting protrusion of the part, (1.3) of the right full-length part of the wood wall (1). The left half-length part of the wood wall (4) is placed by joining the horizontal fitting groove of the part (1.2) and the left full length part of the wood wall's (4) horizontal fitting protrusion of the part (1.3). The joint form of the lock wedge with the right full-length part of the wood wall (1) of the lock wedge of the wood wall (5) (5.1) are placed vertically, the joint forms of the right half-length part of the wood wall (3) and the left half-length part of the wood wall (4) with the lock wedge (5.1) (1.1) are inserted vertically into the groove form and fixed. The horizontal fitting protrusion of the part (1.3) of the right half-length part of the wood wall (3) and the left half-length part of the wood

wall (4) are joined and fixed with the joint channel (62) of the column of the wood wall (6). This is how the first row of brickwork is completed. In order to brick the second row, that is, to raise the wall in the vertical direction, the door frame is mounted externally in the space where the door entrance is separated by the method described above. Subsequently, the vertical fitting protrusion of the part (1,4) of the right full-length part of the wood wall (1) placed in the first row is fixed by joining the right full-length part of the wood wall (1) to the vertical fitting groove of the part (1.5), as well as the horizontal fitting protrusion of the part (1.3) of the right full-length part of the wood wall (1), by joining the channel (7.1) that allows the right full-length part: of the wood wall (1) in the door and window frame left part of the wood wall (7) to be joined with the horizontal fitting protrusion of the part (1.3). The same processes, are repeated in the left full length part of the wood wall (2) forming the facade of the building wall that will remain in the building and the wall is raised. The height of the lock wedge of the wood wall (5) applied to the first row is preferably 2.5 times the height of the right full-length part of the wood wall (1) and can optionally be planned longer. At the end of the lock wedge of the wood wall (5) according to the planned length, wedges preferably twice the length of the right full-length part of the wood wall (1) are placed. The window frame can be placed at the consumer's preferred height. In this embodiment, the joint channels of the lower part of the window and door frame of the wood wall (8) with the vertical fitting protrusion of the part (1.4) of the right full-length part of the wood wall (1) (8.1): the right full-length part of the wood wall (1) - left full length part of the wood wall (2) - the right half-length part of the wood wall (3) and the left half-length part of the wood wall (4) are all joined with the vertical fitting protrusion of the part (1.4). The left part of the door and window frame left part of the wood wall (7) - the upper part of the door and window frame of the wood wall (9) and the right part of the door and window frame of the wood wall (10) are fixed with the horizontal fitting groove of the part (1.2), the horizontal fitting protrusion of the part (1.3) and vertical fitting groove of the part (1.5). The structure is constructed in such a way that it is possible to place windows and doors in desired places by applying the order of arrangement by forming the walls by ordering them to be joined with each series of columns (6). When the wall reaches the desired height, the lock wedges (5) are formed by placing longer parts so that they protrude from the wall height. These protrusions can be used to fix the spacer floor or roof slab that the building will choose according to the consumer's preference. After the walls are completed, the hemp stem (11) is filled in the space between the row forming the exterior and the row forming the interior.

[0022] The scope of protection of the invention is specified in the attached claims and cannot be limited to those explained for sampling purposes in this detailed description, it is evident that a person skilled in the art may exhibit similar embodiments in light of above-mentioned facts

without drifting apart from the main theme of the invention.

REFERENCE NUMBERS GIVEN IN THE FIGURE

[0023]

1. Right full-length part of the wood wall
- 1.1. Joint forms of the part with the lock wedge (5.1)
- 1.2. Horizontal fitting groove of the part
- 1.3. Horizontal fitting protrusion of the part
- 1.4. Vertical fitting protrusion of the part
- 1.5. Vertical fitting groove of the part
2. Left full length part of the wood wall
3. Right half-length part of the wood wall
4. Left half-length part of the wood wall
5. Lock wedge of the wood wall
- 5.1. Joint forms of the lock wedge with 1.1
6. Column of the wood wall
- 6.1. Joint channel of the column with the fitting groove (1.2)
- 6.2. Joint channel of the column with the fitting protrusion (1.3)
7. Door and window frame left part of the wood wall
- 7.1. Joint channel of the door and window frame with the fitting protrusion (1.3)
8. Lower part of the window and door frame of the wood wall
- 8.1. Joint channel of the window frame with the fitting protrusion (1.4)
9. Upper part of the door and window frame of the wood wall
- 9.1. Joint channel of the door and window frame with the fitting groove (1.5)
10. Right part of the door and window frame of the wood wall
- 10.1. Joint channel of the door and window frame with the fitting groove (1.2)
11. Hemp stem

Claims

1. A wood building system for use for shelter etc., **characterized in that**; it comprises at least one right full-length part of the wood wall (1), at least one left full length part of the wood wall (2), at least one right half-length part of the wood wall (3), at least left half-length part of the wood wall (4), at least one lock wedge of the wood wall (5), at least one column of the wood wall (6), at least one door and window frame left part of the wood wall (7), at least one lower part of the window and door frame of the wood wall (8), at least one upper part of the door and window frame of the wood wall (9), at least one right part of the door and window frame of the wood wall (10) that have independent shapes from each other and can be connected to each other, and at least one hemp

stem (11) for filling the structural space formed during the installation of these parts.

2. The wood building system according to claim 1, **characterized in that**; the right full-length part of the wood wall (1) comprises at least one joint form of the part with the lock wedge (5.1) (1.1), at least one horizontal fitting groove of the part (1.2), at least one horizontal fitting protrusion of the part (1.3), at least one vertical fitting protrusion of the part (1.4) and at least one vertical fitting groove of the part (1.5).
3. A wood building system according to claim 1, **characterized in that**; the left full length part of the wood wall (2) comprises the joint form of the part with the lock wedge (5.1) (1.1), the horizontal fitting groove of the part (1.2), the horizontal fitting protrusion of the part (1.3), the vertical fitting protrusion of the part (1.4) and the vertical fitting groove of the part (1.5).
4. A wood building system according to claim 1, **characterized in that**; the right half-length part of the wood wall (3) comprise the joint form of the part with the lock wedge (5.1) (1.1), the horizontal fitting groove of the part (1.2), the horizontal fitting protrusion of the part (1.3), the vertical fitting protrusion of the part (1.4), and the vertical fitting groove of the part (1.5).
5. A wood building system according to claim 1, **characterized in that**; the left half-length part of the wood wall (4) comprises the joint form of the part with the lock wedge (5.1) (1.1), the horizontal fitting groove of the part (1.2), the horizontal fitting protrusion of the part (1.3), the vertical fitting protrusion of the part (1.4) and the vertical fitting groove of the part (1.5).
6. A wood building system according to claim 1, **characterized in that**; the joint form of the lock wedge with 1.1 of the lock wedge of the wood wall (5) (5.1) can be joined by fitting with the channels in the right full-length part of the wood wall (1) and the left full length part of the wood wall (2).
7. A wood building system according to claim 1, **characterized in that**; the column of the wood wall (6) comprises at least one joint channel of the column with the fitting groove (1.2) (6.1) and at least one joint channel of the column with the fitting protrusion (1.3) (6.2).
8. A joint channel of the column of the wood wall with the fitting groove (1.2) (6.1) according to claim 7, **characterized in that** it is fixed by joining the right full-length part of the wood wall (1) with the horizontal fitting groove of the part (1.2).
9. A joint channel of the column with the fitting protru-

sion (1.3) (6.2) according to claim 7, **characterized in that** it is fixed by the right full-length part of the wood wall (1) with the horizontal fitting protrusion of the part (1.3).

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- 10.** A wood building system according to claim 1, **characterized in that**; it comprises at least one wood door frame and wood window frame formed by combining at least one door and window frame left part of the wood wall (7), at least one upper part of the door and window frame of the wood wall (9) and at least one right part of the door and window frame of the wood wall (10).
- 11.** A wood door frame according to claim 10, **characterized in that**; the door and window frame left part of the wood wall (7) comprises at least one joint channel of the door and window frame with the fitting protrusion (1.3) (7.1) to join the right full-length part of the wood wall (1) with the horizontal fitting protrusion of the part (1.3).
- 12.** A wood door frame according to claim 10, **characterized in that**; right part of the door and window frame of the wood wall (10) comprises at least one joint channel of the door and window frame with the fitting groove (1.2) (10.1) to join the right full-length part of the wood wall (1) with the horizontal fitting groove of the part (1.2).
- 13.** A wood window frame according to claim 10, **characterized in that**; the upper part of the door and window frame of the wood wall (9) comprises at least one joint channel of the window frame with the fitting protrusion (1.4) (8.1) to join the right full-length part of the wood wall (10) with the vertical fitting protrusion of the part (1.4).
- 14.** A wood window frame according to claim 10, **characterized in that**; the upper part of the door and window frame of the wood wall (9) comprises at least one joint channel of the door and window frame with the fitting groove (1.5) (9.1) to join the right full-length part of the wood wall (1) with the vertical fitting groove of the part (1.5).
- 15.** A wood window frame according to claim 10, **characterized in that**; right part of the door and window frame of the wood wall (10) comprises joint channel of the door and window frame with the fitting protrusion (1.3) (7.1) to join the right full-length part of the wood wall (1) with the horizontal fitting protrusion of the part (1.3).

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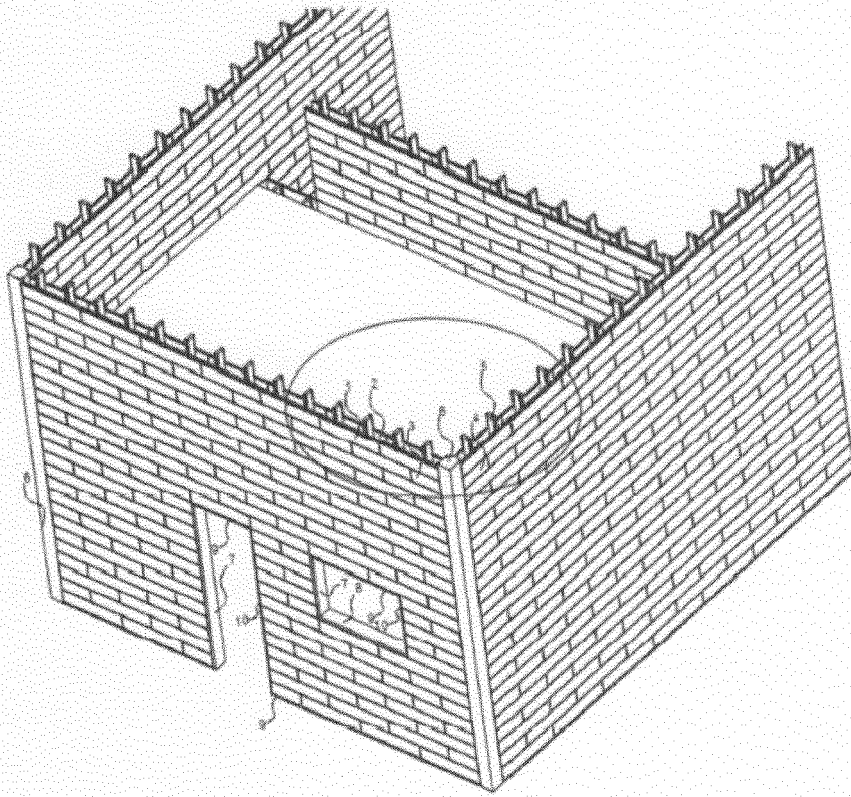


FIGURE 1

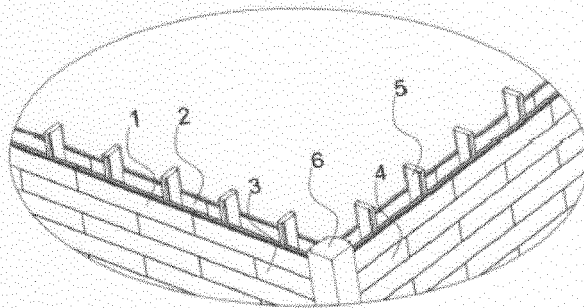
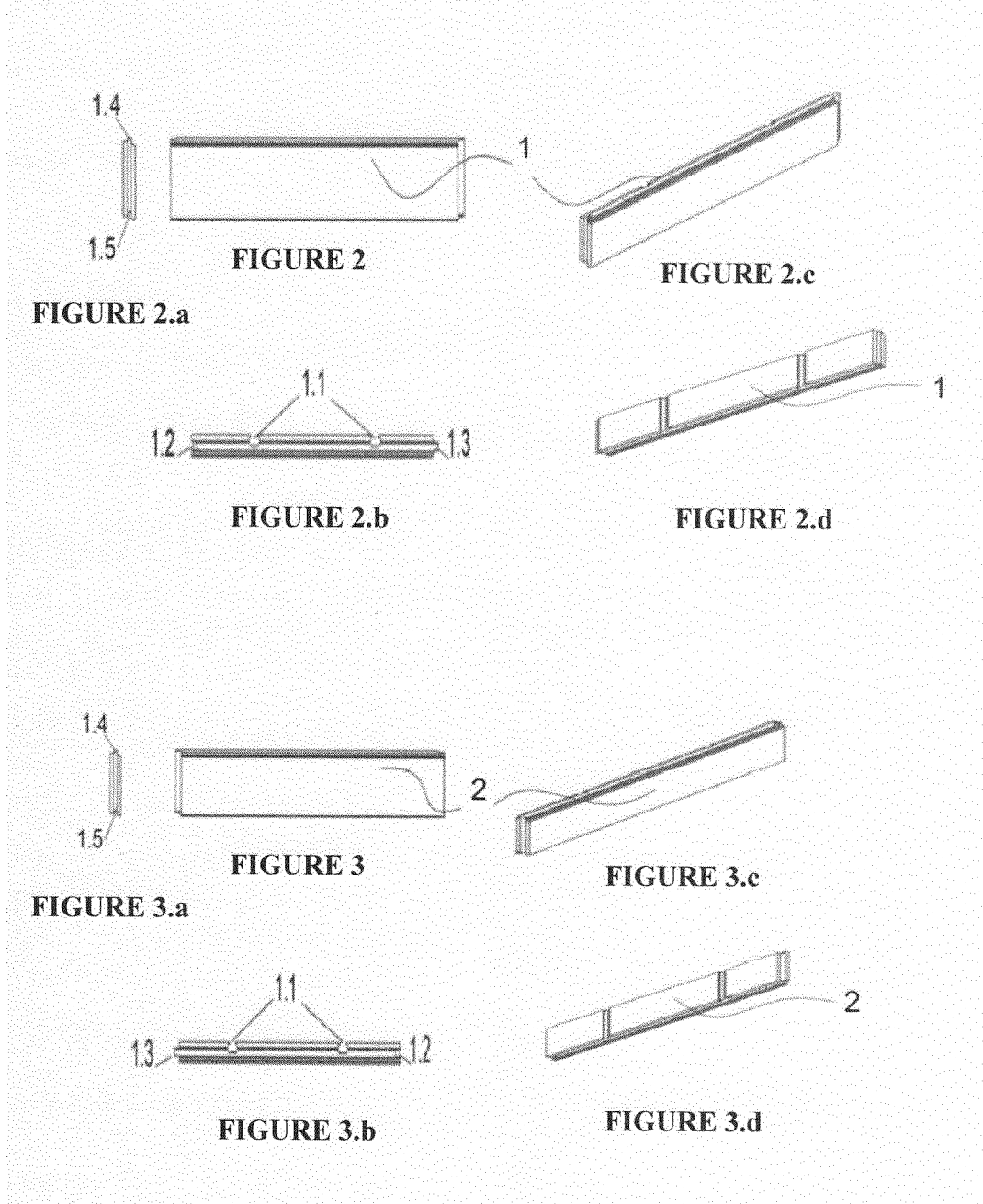


FIGURE 1.a



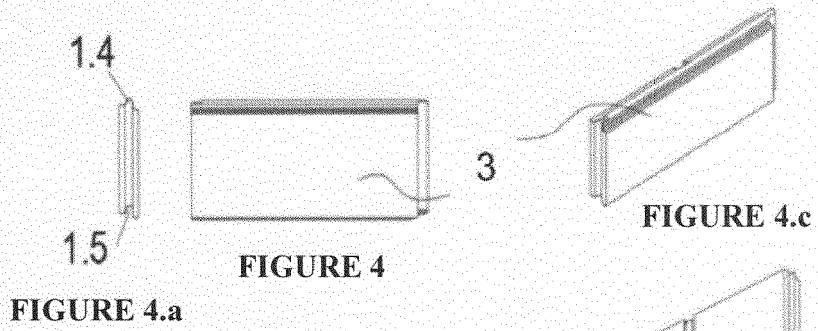


FIGURE 4

FIGURE 4.a

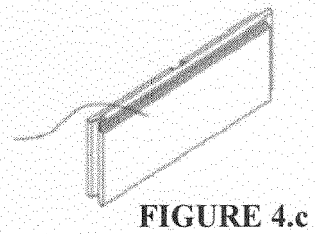


FIGURE 4.c

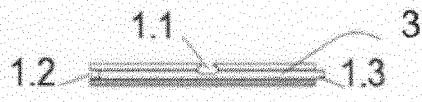


FIGURE 4.b

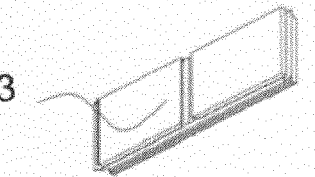


FIGURE 4.d

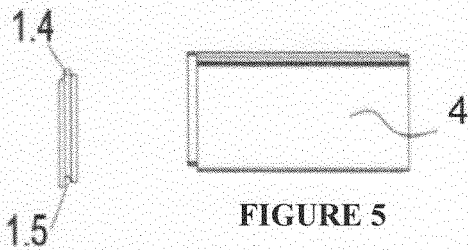


FIGURE 5

FIGURE 5.a

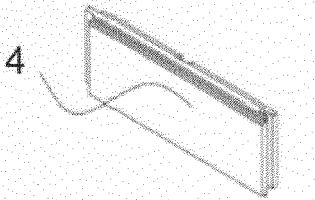


FIGURE 5.d

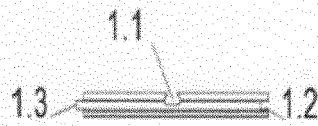


FIGURE 5.b

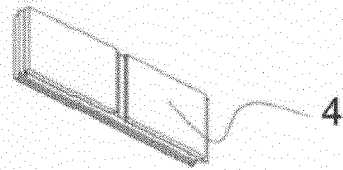


FIGURE 5.c

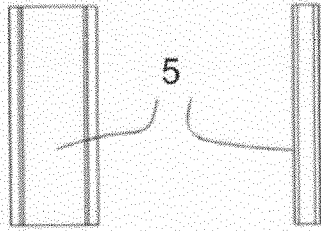


FIGURE 6

FIGURE 6.a

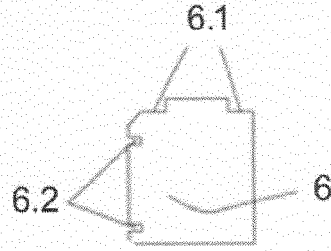


FIGURE 7

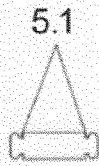


FIGURE 6.b

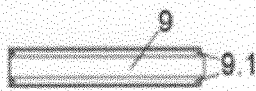


FIGURE 8.a

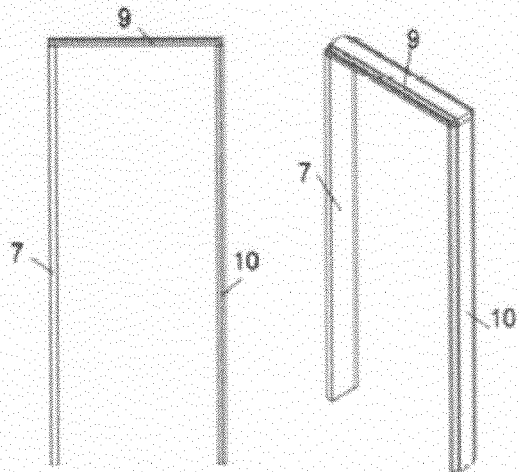


FIGURE 8

FIGURE 8.b

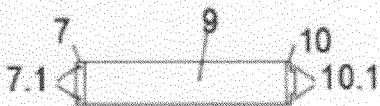


FIGURE 8.c

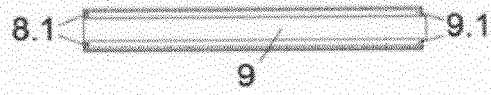


FIGURE 9.b

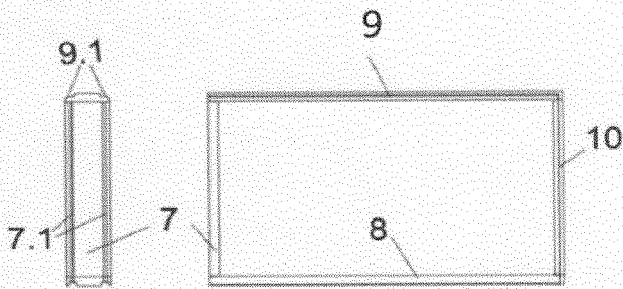


FIGURE 9.a

FIGURE 9

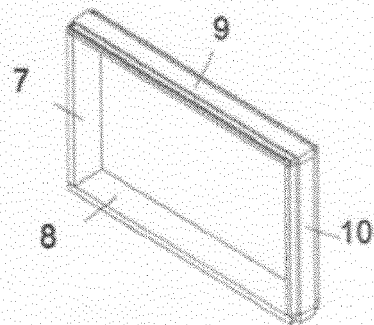


FIGURE 9.d

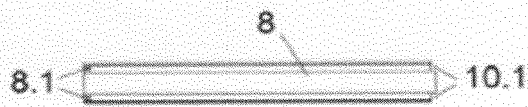


FIGURE 9.c

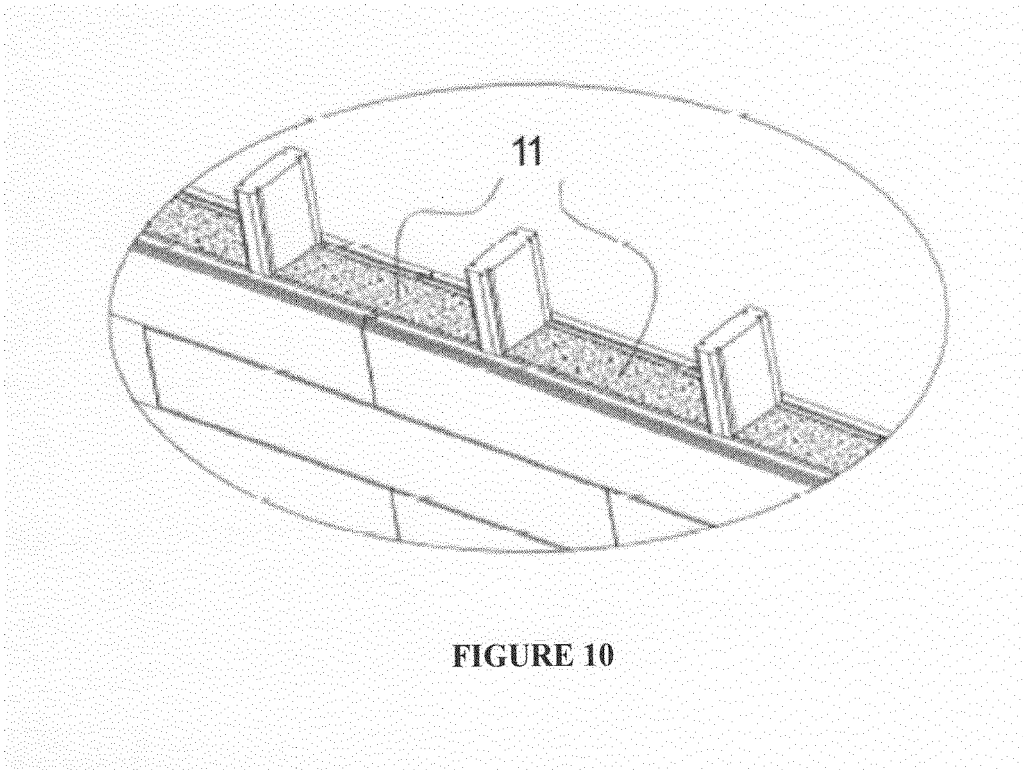


FIGURE 10



EUROPEAN SEARCH REPORT

Application Number

EP 22 16 9260

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	FR 3 100 551 A1 (VALEURS ALPINES [FR]) 12 March 2021 (2021-03-12) * paragraph [0028] - paragraph [0139]; figures 1-5 *	1-15	INV. E04B2/70 E04B2/84
X	FR 2 930 959 A1 (GUIDEL SOC PAR ACTIONS SIMPLIF [FR]) 13 November 2009 (2009-11-13) * page 4, line 34 - page 14, line 31; figures 1-10 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 September 2022	Examiner Melhem, Charbel
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 22 16 9260

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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28-09-2022

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 3100551 A1	12-03-2021	EP 4028603 A1	20-07-2022
		FR 3100551 A1	12-03-2021
		WO 2021047930 A1	18-03-2021

FR 2930959 A1	13-11-2009	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- WO 201106879 A [0008]