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(54) **MODULAR CELLULAR PARTITION**

(57) A modular cellular partition formed by the joining of several partition modules joined by gluing.

Each partition module comprises two parts in the form of a sandwich, the inner part consisting of so-called cellular board (1), and covering this on both sides are two boards (3) of the plasterboard or MD type.

The inner composition of the partition is formed by the cellular board, composed by pressing wood particles

and glue, forming a broken surface of zig-zagging, oblique, transverse walls with a V-shaped profile of truncated vertices; the parallel strips corresponding to the truncations being coplanar for application of the adhesive for joining the sheets.

In the partition there are solid parts formed by the cellular board (1) and hollow parts (2), for ducts.

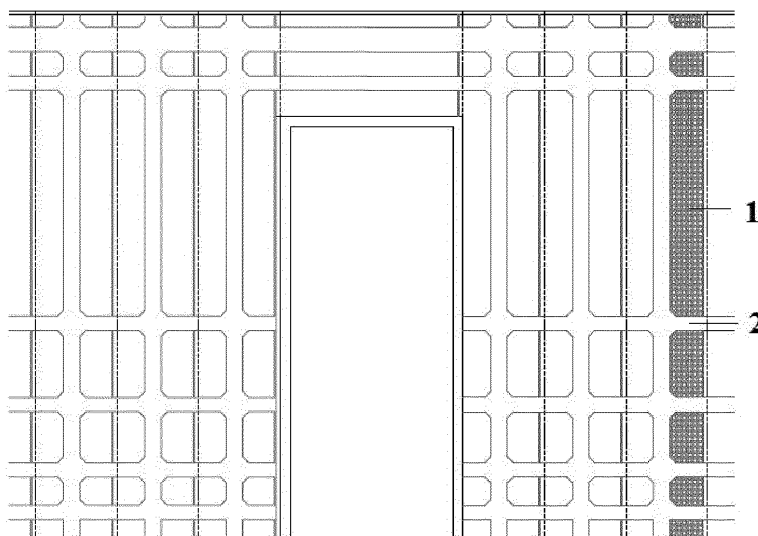


FIG. 1

Description

Object of the invention

[0001] The present invention, a "Modular cellular partition" as stated in the title of this patent specification, relates to a partition by modules for dividing any type of building, having very advantageous features with respect to the different types of existing partitions so far in the market.

State of the art

[0002] In the market there are different types of partitions: made of brick, plasterboard, wood, but none of them have the features described below. The modular cellular partition, object of this invention, has with respect to these types of partition important advantages in terms of assembly ease and time, the on-site cleaning and the good finish for subsequent painting. In this partition the possibility of cracks does not exist, it improves acoustics, saves on heating and has a much lower weight than a conventional partition.

[0003] A precursor of this partition is disclosed in patent No. P201001377 of the same applicant as the present invention, since its inner composition is the same as the cellular board disclosed in that patent. Said board is formed by pressing wood particles and glue, forming a broken surface of zig-zagging, oblique, transverse walls with a V-shaped profile of truncated vertices, the parallel strips corresponding to the truncations being coplanar for application of the adhesive for joining the sheets to each other or with sheets of the plasterboard, MD type or the like.

[0004] The improvement described below with respect to the patent P201001377 is that in this patent a mould for manufacturing cellular boards and the board manufactured with said mould is protected; in this new patent the object of the invention is a partition (made with the boards disclosed in patent P201001377) by modules for dividing any type of building.

Description of the invention

[0005] The present invention relates to a partition formed by joining several partition modules for dividing any type of building. As it is composed of modules, which are simply joined together by gluing, it is mounted very quickly due to its lightness and cleanliness, since there is no cement or other elements that generate debris.

[0006] This partition module consists of two parts in the form of a sandwich, so that the inner part would consist of a so-called cellular board, and covering this on both sides two boards of the plasterboard, MD type or the like would be placed.

[0007] The composition of the partition interior would be formed of the type of cellular board whose invention is reflected in patent No. P201001377 of the same ap-

plicant as the present invention. Said board is formed by pressing wood particles and glue, forming a broken surface of zig-zagging, oblique, transverse walls with a V-shaped profile of truncated vertices, the parallel strips corresponding to the truncations being coplanar for application of the adhesive for joining the sheets to each other, or with sheets of the plasterboard, MD type.

[0008] The formation of these partitions would be made by assembly modules. The joining of the modules is made by glueing.

[0009] These modules are to be provided with a system of ducts for the installation of all types of electrical, plumbing, heating, communication services, etc., needed in a residential building or commercial premises.

[0010] The attachment of the partition to the floor and ceiling is to be made by a metallic omega profile.

Description of the figures

[0011]

- FIGURE No. 1 : In this figure, an elevational view of the partition formed by the assembly of several modules and a door is shown.
- FIGURE No. 2: A plan view of Figure 1.
- FIGURE No. 3: In this figure, an elevational view of the partition formed by the assembly of modules and a window is shown.
- FIGURE No. 4: In this figure, the assembly of the modules is shown in plan view.
- FIGURE No. 5: An elevational view of a hollow part (2) of the partition.
- FIGURE No. 6: A plan view of the partition where the joining of the corners can be seen.
- FIGURE No. 7: An elevational view of the attachment of the partition to the floor and ceiling by means of a metallic omega profile in assembly process.
- FIGURE No. 8: An elevational view of the attachment of the partition to the floor and ceiling by means of a metallic omega profile, with the partition completely assembled.
- FIGURE No. 9: Drawing of the cellular board.
- FIGURE No. 10: A plan view of the junction between partitions.

Preferred embodiment of the invention

[0012] The cellular partition is formed by the joining of several partition modules.

[0013] These modules consist of two parts, the inner part would consist of so-called cellular board (1) and, covering this on both sides, two boards (3) of the plasterboard, MD type or the like would be placed.

[0014] The formation of these partitions would be made through assembly modules which are joined by gluing.

[0015] In the central part of the partition there are solid parts formed by the cellular board (1) and hollow parts (2), which would form the ducts for the needed services.

[0016] In the solid parts of the cellular board there are bevels (4) at the corners to facilitate the passage of the flexible pipes (spaghetti), which would be employed for housing all the necessary wiring to be passed through the hollow parts (2). (Figure 5).

[0017] These hollow parts (2) are located at certain heights from the floor, which are to be heights at which sockets, switches, piped music, etc., are located.

[0018] The attachment of the partition to the floor and ceiling is made by a metallic omega profile (5) (Figures 7 and 8).

[0019] At the joining of the partitions are the installation channels and an inspection lid for the installations (6), (Figure 10).

Claims

1. A modular cellular partition, **characterised in that** it is formed by the joining of several partition modules, which consist of two parts: an inner part formed by a cellular board (1), and the outer parts which cover it are two boards (3) of the plasterboard or MD type.
2. The modular cellular partition, according to the preceding claim, **characterised in that** the cellular board of the interior of the partition is formed by pressing wood particles and glue, forming a broken surface of zig-zagging, oblique, transverse walls with a V-shaped profile of truncated vertices; the parallel strips corresponding to the truncations being coplanar for application of the adhesive for joining the sheets to each other or with sheets of the plasterboard, MD type.
3. The modular cellular partition, according to the preceding claims, **characterised in that** said partitions are provided with hollow parts (2) forming a system of ducts.
4. The modular cellular partition, according to the preceding claims, **characterised in that** the solid parts of the cellular boards have bevels at the corners (4).
5. The modular cellular partition, according to the preceding claims, **characterised in that** the attachment of the partition to the floor and ceiling is made by a metallic omega profile (5).

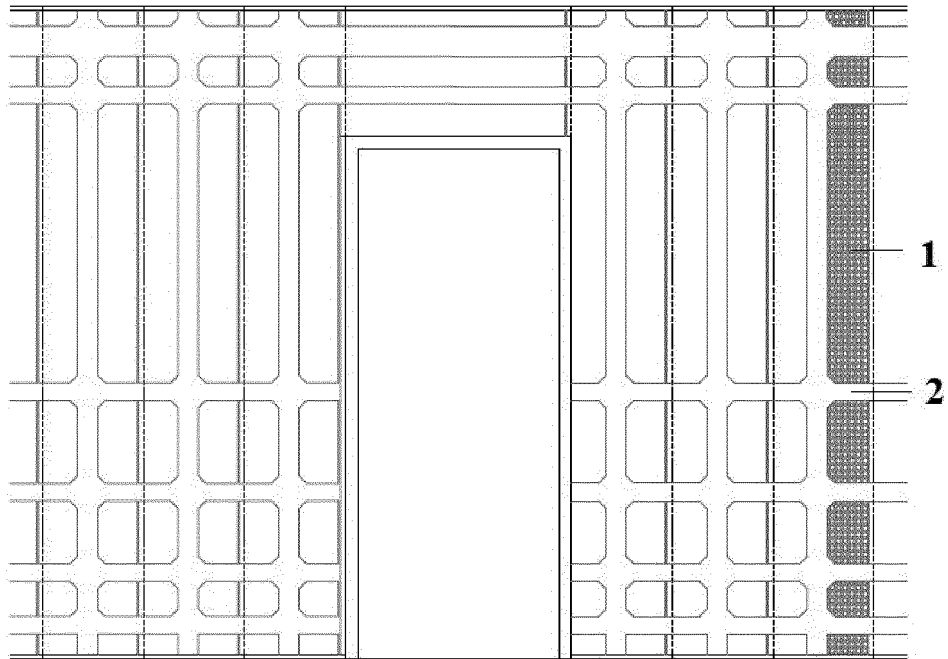


FIG. 1

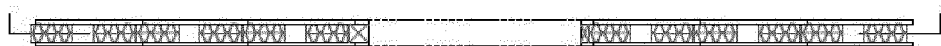


FIG. 2

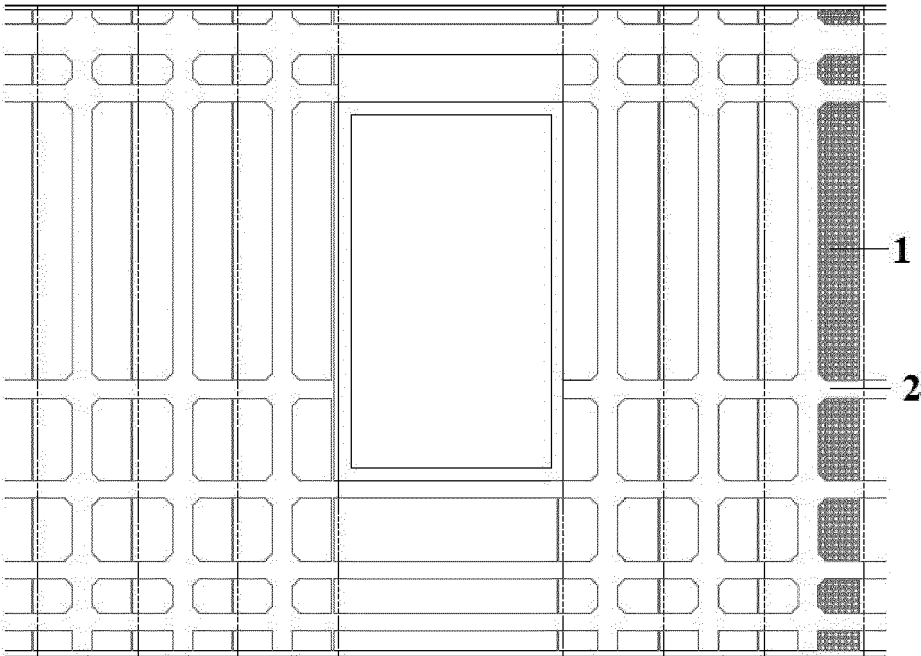


FIG. 3

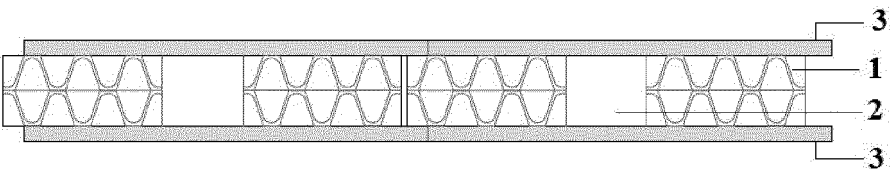


FIG. 4

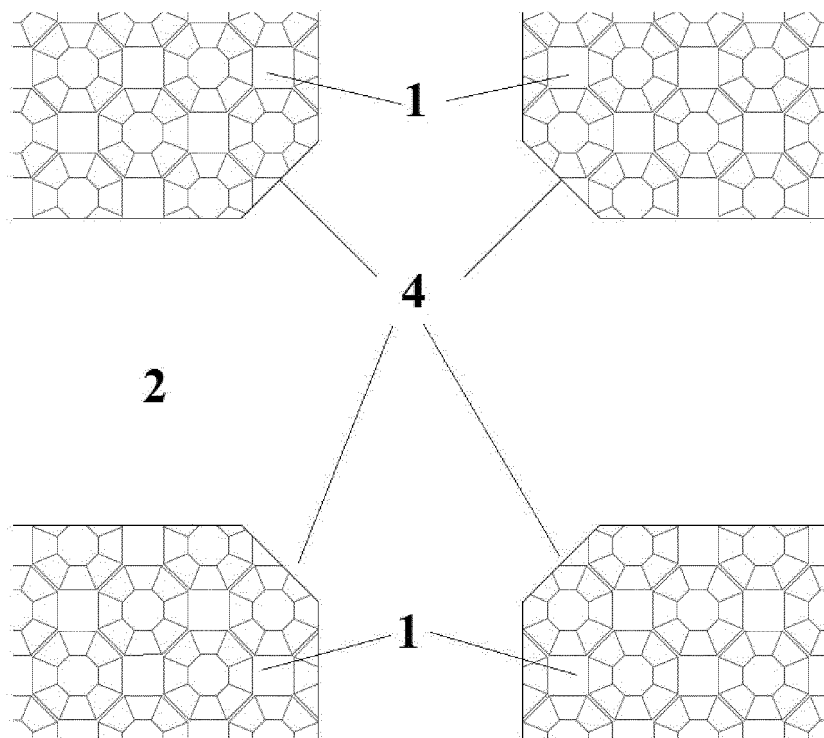


FIG. 5

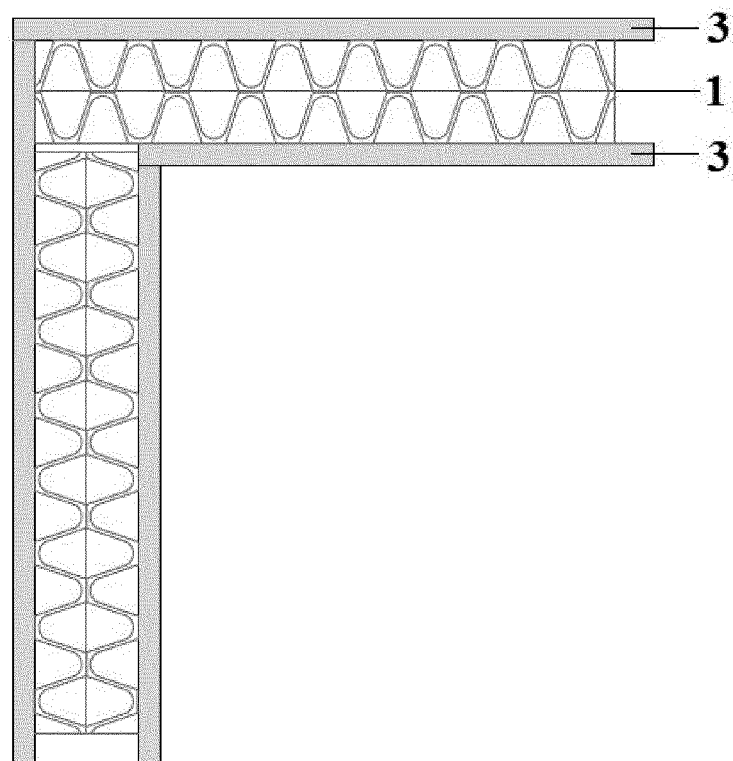


FIG. 6

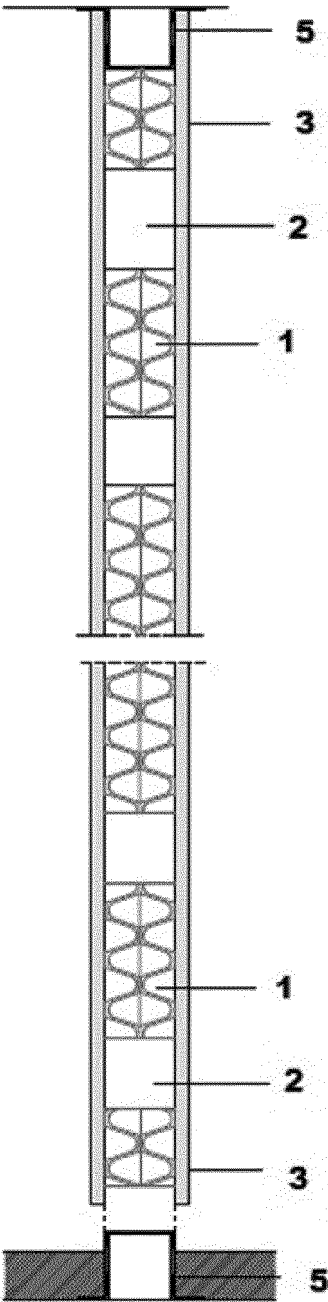


FIG. 7

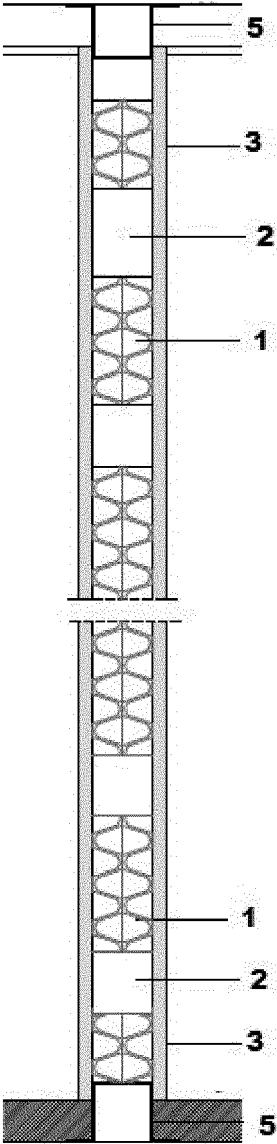


FIG. 8

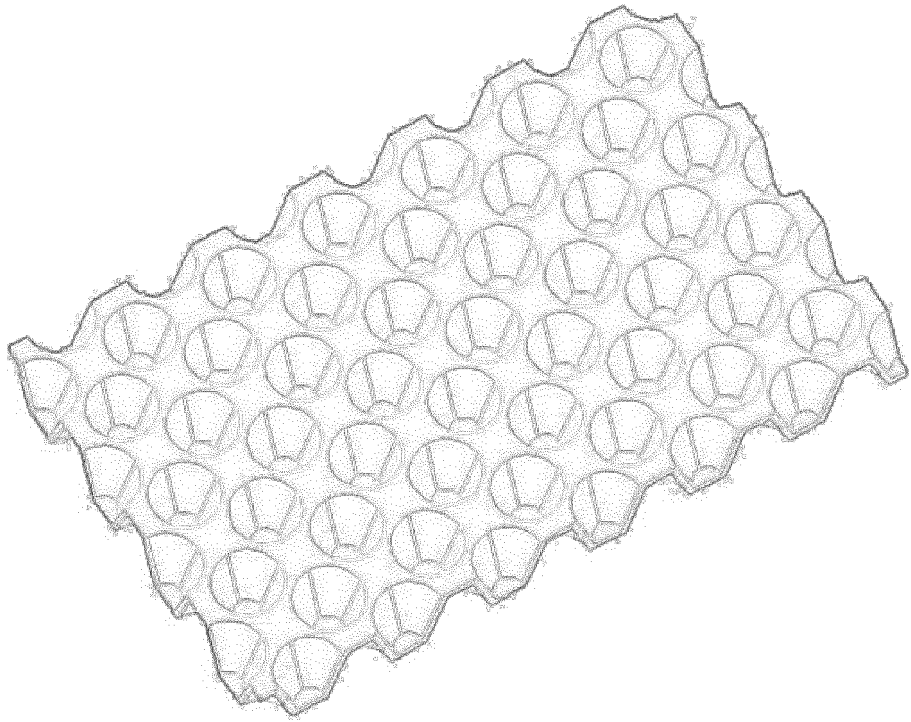


FIG. 9

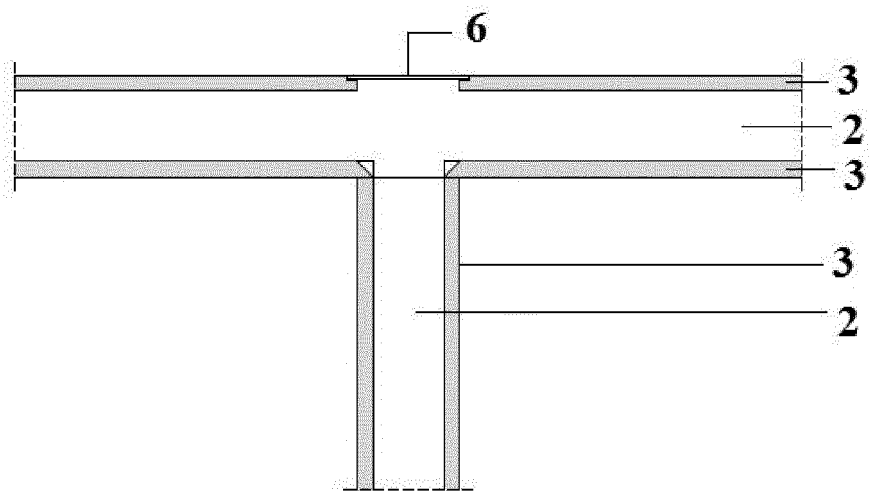


FIG. 10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2016/000074

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
E04B, E04C

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

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

EPODOC, INVENES

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2839995 A1 (HONORE HUGUES) 28/11/2003, page 3, line 15 - page 4, line 26; figures.	1
Y		2-5
Y	ES 2380855 A1 (LOPEZ SANCHEZ MANUEL ET AL.) 21/05/2012, claims 5-6; figures 1 and 2.	2
Y	US 2003019176 A1 (ANDERSON D W) 30/01/2003, abstract	3
Y	US 5689924 A (MASON TIMOTHY R) 25/11/1997, figures 2,3	5

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance.	
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"O" document referring to an oral disclosure use, exhibition, or other means.	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents, such combination being obvious to a person skilled in the art
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No.

Information on patent family members

PCT/ES2016/000074

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
FR2839995 A1	28.11.2003	NONE	
-----	-----	-----	-----
ES2380855 A1	21.05.2012	CL2012003542 A1	18.10.2013
		RU2012152808 A	20.06.2014
		JP2013545631 A	26.12.2013
		US2013344262 A1	26.12.2013
		US8951618 B2	10.02.2015
		CN102971124 A	13.03.2013
		CN102971124B B	25.11.2015
		CA2800739 A1	26.04.2012
		WO2012052576 A1	26.04.2012
		EP2631053 A1	28.08.2013
		EP2631053 A4	25.02.2015
-----	-----	-----	-----
US2003019176 A1	30.01.2003	US6711872 B2	30.03.2004
-----	-----	-----	-----
US5689924 A	25.11.1997	NONE	
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INTERNATIONAL SEARCH REPORT

International application No.

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CLASSIFICATION OF SUBJECT MATTER

E04B2/74 (2006.01)

E04C2/26 (2006.01)

E04C2/34 (2006.01)

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- WO P201001377 A [0003] [0007]