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(12) # EUROPEAN PATENT APPLICATION

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(54) **Procedures introduced into the manufacture of partitions and building walls.**

(57) Partitions and building walls constituted by a first layout strip (1) around the work permiter and the corresponding face plates (2) made of polystyrene anchored with extensible metal elements and aluminium tubes from the floor to the ceiling and the added-plaster layers (3) on both sides of the face plates (2). These plates are placed separated each other in the assembly separation (4) about 2-3 cm.

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The purpose of this invention patent is the declaration upon which the exclusive privilege of industrial exploitation must fall on in the national territory in accordance with the industrial property law in force which as indicated in the enunciation deals about the procedures introduced into the manufacture of partitions and building walls as well as facings the patent relates to consisting in the placing, of expanded polystyrene plates of different sizes as required from the floor to the ceiling and leaving an interseparation of about 20-30 mm. and on which black plaster mined with a retarder and an adherent material is applied by means of a projection machine. The production is carried out in two layers, the first to fasten the plates and the second to obtain a 15 mm. thickness on each face. The added plaster, main component of this patent, consists of a plaster paste with the product became liquid without solvent to convert the mass in a building material and due to the binding material is a liquid element and its mixture is made in the mixing water, allows and secures an homogenous didtribution of the paste and consequently the adherence is equal in all its use allowing also the incorporation of color into de mass for in certain cases, to finish the work where the application of paint is unavoidable. THE obtainment of this adherent paste offers an extensive application field which up to now was closed to some conventional systems. The possibility of substituting the ceramic Material for expanded polystyrene plates from the "floor to the ceiling" develops a building procedure whore the elimination of humidity, the weight reduction, the obtainment of a high thermal and acoustic insulation, the protection against fire and deviation to a fully competitive cost, make possible to convert an entelechy into reality.

The application of this product, with the technique of placing plates and plaster mass, goes from partitions, air chambers, closings, aisle roofs, reinforced walls, forgings, one-family dwelling houses, structural systems, etc. to the manufacture of small pieces such as plaster plates with insulation incorporated into the old work, shelves, dummy insulating ceilings, decoratives panels, etc.

This statement of the procedures enhances the importance of this project with the use thereof in the very wide building field. The continous use of ceramic material as main or unique element in different applications in the building field and the possibility of being substituted for expanded polystyrene in every application, opens an extensive and prospective market to place millions of square meters with this plate and added-plaster system for the building of every type of partitions, thick partitions or walls.

Besides the economic and commercial exposure, it is necessary to pint out the reflection points and consider the final result of this project. In addition to the above, it is also necessary to mention the easy assembly system which does not require any specialization but in the handling of the projection machine, the use of which is usual in developped countries.

For a better understanding of the above and only as non limitative exemple, a drawing is enclosed on which

figure 1 shows a side perspective view of the plate assembly with the added plaster in a coupling exemple.

Reference is made in this figure to the following elements:

1. Layout strip
2. Face plate
3. Added plaster
4. Assembly separation

Concerning the above mentioned figures representing schematically their industrial performance which are included as merely informative and no limitative purposes, we have:

Procedures introduced into the manufacture of partitions and building walls constituted by a first layout strip 1) around the work perimeter and the corresponding face plates 2) made of polystyrene anchored with extensible metal elements and aluminium tubes from the floor to the ceiling and the added-plaster layers 3) on both sides of the face plates 2). These plates are placed separated each other in the assembly separation 4) about 2-3 cm.

Sufficiently described the nature of the invention as well as its practic performance, only must be added that the circunstances of the size, shape, and material are variable, specially as far as the integrating elements of the assembly is concerned as everything not implying alteration of the essence of the exposed object could be modified. This description must be taken in widest sense and not as a limitation of performance possibilities and consequently an invention patent is applied for in Spain as per the following

Claims

1. PROCEDURES INTRODUCED INTO THE MANUFACTURE OF PARTITIONS AND BUILDING WALLS, cgaracterized by the layout of the partition, thick partition or wall on the work by means of a polystyrene strip of a certain thickness fastened with added plaster. The polystyrene strip is placed around the perimeter where the partition is to be built including the wooden or metal preframes of doors for acces, passing doors, wardrobe doors, windows, etc. The whole thickness of the polystyrene will match with the thickness of the finished parameter.

2. PROCEDURES INTRODUCED INTO THE MANUFACTURE OF PARTITIONS AND BUILDING WALLS as per the first claim characterized by the parameters being constituted by the placing of the polystyrene plates of certain measurements on the perimeter layout strip from the floor to the ceiling in the desired thickness. The polystyrene plates are separated each other and from the walls, floor, ceiling and wooden frames about 2-3 cm. These plates mus have 3 cm. less than the layout strip and are centered in order to leave a 15 mm. space at each side for the application of added plaster, plates and until they are well fastened by the added plaster they are attached to by extensible metal rules and aluminium tubes from the floor to the ceiling and the placing of door frames, windows and wardrobes is made at the same time of the plates.

3. PROCEDURES INTRODUCED INTO THE MANUFACTURE OF PARTITIONS AND BUILDING WALLS as per the second claim characterized by the fact that after the plates have been placed and fastened together with the frames, the conduits for conductors, electricity and plumbing boxes will be provided with marks which will be covered with adhesive strips of proper wideness for the conductors. Afterwards, the added-plaster layer is applied by means of a mixing pump or similar until filling up the repair joints between the plates and the holes made in the plates after being placed so that a 2-3 mm. thick plaster layer is formed on both sides for giving them consistency and later, before the plaster sets, the adhesive strips are removed to expose the installation marks.

4. PROCEDURES INTRODUCED INTO THE MANUFACTURE OF PARTITIONS AND BUILDING WALLS as per the first, second and third claims characterized by the fact that the rules and the alumium tubes are withdrawn and installation recesses are made with high temperature air heating to compress the polystyrene in order to receive the conductor tubes and inspection boxes.

5. PROCEDURES INTRODUCED INTO THE MANUFACTURE OF PARTITIONS AND BUILDING WALLS as per the first, second, third and fourth claims characterized by the fact that on the parameter the second and definitive added-plaster layer has been applied to obtain a total of 15 mm in each parameter face and the projection is made by means of a mixing pump and finished after levelled with a rule, is trowelled to obtain a smooth and fully finished surface.

6. PROCEDURES INTRODUCED INTO THE MANUFACTURE OF PARTITIONS AND BUILDING WALLS as per the first, second, thid, fourth and fifth claims characterized by the fact that in the building parameters made for the forming insulating chambers on concrete or ceramics, the joints or separations between the plates are removed and there is no filling hole and plates are mounted after the plaster projection on concrete bricks. Previously, the perimeter has determined the layout strip which protudes from the plate face 15 mm. so that the added-plaster projection makes level with the same after the plaster coat application as in the wall building procedure.

7. PROCEDURES INTRODUCED INTO THE MANUFACTURE OF PARTITIONS AND BUILDING WALLS. In accordance with the description and claims and the corresponding report consisting of nine typewritten sheets on only one page and an illustrative drawing.

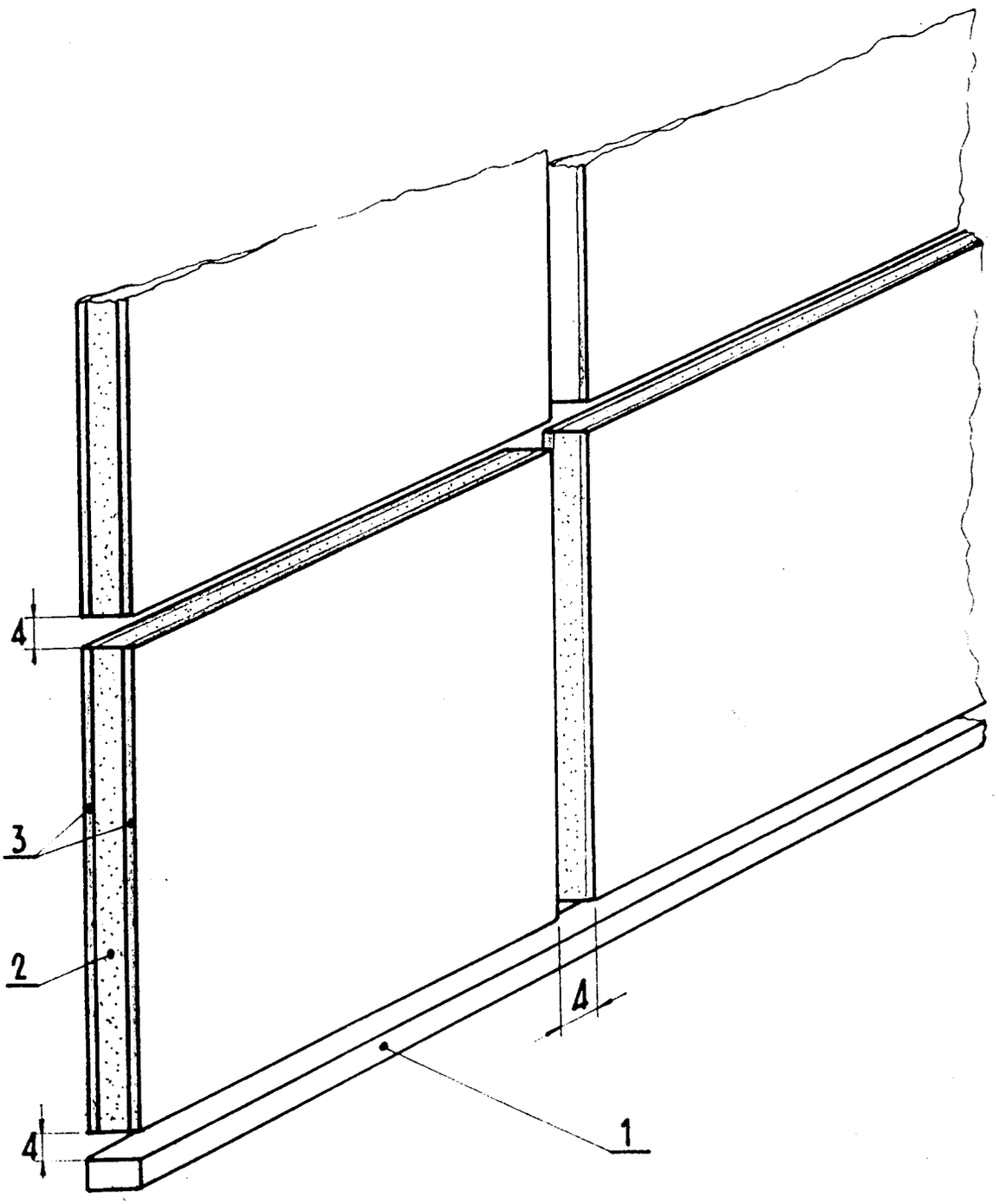

FIG-1

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 92 50 0043

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	DE-A-2 632 360 (AMERICAN VOLKSCASTLE INTERNATIONAL, INC.) * claims 1,4,21,22; figures 1-3,9,10 * * page 15, paragraph 2 - page 16, paragraph 1 * * page 24, paragraph 2 * * page 20 *	1-3,5	E04B2/84 E04B1/16 E04B2/72 E04C2/26 E04F21/06
X	FRICK/KNÖLL/NEUMANN 'BAUKONSTRUKTIONSLEHRE 1' 1975 , B.G.TEUBNER , STUTTGART 26th edition, page 160 * page 160; figure 160.1 *	1	
X	GB-A-2 173 835 (A. LEARMONTH) * the whole document *	1,2	
A	FR-A-2 537 629 (T. IOTTI) * page 1, line 13 - line 27 *	1	
A	US-A-4 253 288 (J. H. CHUN) * column 5, line 32 - column 5, line 33 * * figures 1,9,10 *	3	TECHNICAL FIELDS SEARCHED (Int. Cl.5) E04B E04C E04F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
BERLIN	22 DECEMBER 1992	BOUSQUET K.C.E.

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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