(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 112 548 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
04.01.2017 Bulletin 2017/01

(51) Int Cl.:
E04C 1/40 *(2006.01)* ***E04C 1/41*** *(2006.01)*

(21) Application number: **16382308.1**

(22) Date of filing: **29.06.2016**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD

(30) Priority: **29.06.2015 ES 201530930**

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(54) **INSULATION BLOCK FOR THE ERECTION OF WALLS**

(57) The present invention relates to an insulating block for the erection of walls, including two parallel main wall faces (10) surrounded and attached to one another by means of four perimetral faces (11); a body of insulating material (20); at least one cladding panel (21) of rigid material attached to the body of insulating material, said cladding panel (21) forming at least one main face of the block; said at least one cladding panel (21) covering a main face taking up less than 25% of the block volume; and the distance existing between the main faces (10) being at least 7 cm; the insulating material (20) having a density of between 100 and 200 kg/m^3; and a compressive strength of at least 100 kPa; such that the body of insulating material (20) of each block allows supporting the weight of other identical superimposed blocks for the erection of self-supporting walls at least 3 m high.

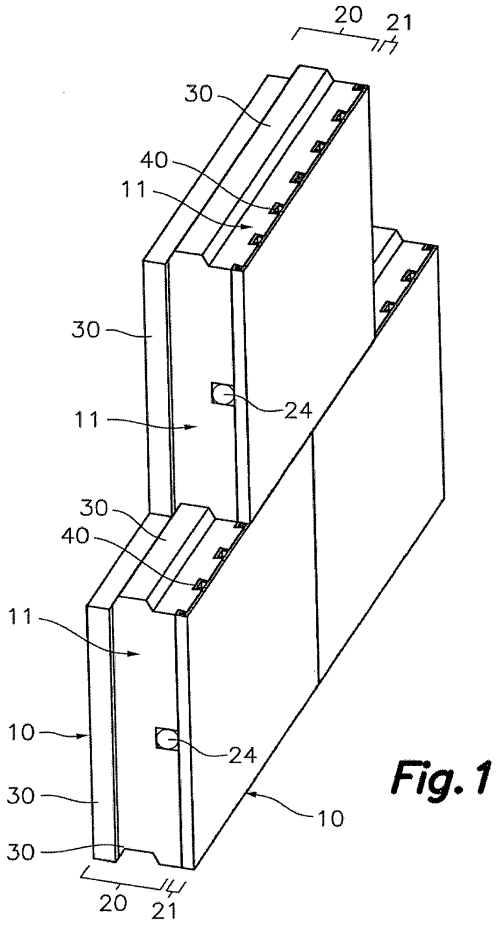

Fig. 1

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Description

Field of the Art

[0001] The present invention relates to an insulating block for the erection of walls which provides thermal and acoustic insulation by means of prefabricated blocks combining a body of insulating material with a cladding panel, for example ceramic, porcelain, stone or resin or fiberboard.

State of the Art

[0002] Insulating blocks for the erection of walls combining thermal and acoustic insulating material with a ceramic cladding panel are known.

[0003] Many of the known documents describe cladding blocks that must be fixed on a structural member or wall for support, as in the case of patent documents DE1807883, EP2789765 and EP1997977. However, these solutions do not allow erecting self-supporting walls as the blocks are not envisaged for this purpose.

[0004] Other insulating blocks conceived for the erection of self-supporting walls, such as those disclosed by patent documents DE4437885 and DE4233633, are also known.

[0005] In the case of the first patent document DE4437885, an artificial stone brick having a cladding of insulating material is proposed. In this case, the brick provides structural strength which, as a result of its thickness, can even allow chases for electrical installations without the structural capacity thereof being reduced; however, the total thickness of the block will be very high, taking up a large surface area when placed, or it will have a cladding of insulating material with a reduced thickness and therefore low insulating capacity.

[0006] In the case of the second patent document DE4233633, an artificial stone brick filled with a core of insulating material, which is proposed to be hard foam, is proposed. The structural strength of the product described in this patent document is provided by an artificial stone material, arranging it on opposite outer faces and also inside the insulating material for the purpose of assuring a correct load transmission through said artificial stone material. Making horizontal chases in this product, affecting said artificial stone material, would cause unwanted weakening of the structural capacity of the block, since the insulating material alone is not prepared for supporting the blocks superimposed on top of same.

[0007] Furthermore, in this solution proposed by patent document DE4233633, the block cannot be covered with artificial stone material on only one of its faces, since it requires resistant capacity on both outer faces to enable support given that the blocks are stacked on one another.

[0008] Documents describing blocks envisaged for the erection of walls in which the resistant material is lightweight or foam concrete for the purpose of providing it with insulating properties are also known, as in patent document DE102006004434, for example. This solution differs from the proposed solution because the insulating qualities of lightweight concrete are not comparable with those provided by materials typically used as insulating materials such as foams, polyurethanes, fiberboard panels, etc. Therefore, the insulating properties of the wall obtained will be deficient, or thicker and heavier walls will be required.

Brief Description of the Invention

[0009] The present invention relates to an insulating block for the erection of walls including:

- two parallel main wall faces surrounded and connected to one another by means of four perimetral faces;
- a body of insulating material;
- at least one cladding panel of rigid material attached to the body of insulating material, said cladding panel forming at least one main face of the block;
- said at least one cladding panel covering each main face taking up less than 25% of the block volume;

[0010] Therefore, the proposed block has two main wall faces parallel to one another, which will be arranged vertically in an assembly position and form the accessible faces of a wall erected by means of arranging a plurality of said blocks laterally adjacent to and stacked on one another. The four perimetral faces face the other perimetral faces of other blocks in this assembly arrangement.

[0011] Each block is therefore made up of a body of insulating material to which at least one cladding panel of rigid material is attached providing a covering for at least one of said main faces. The rigid material forming the cladding panel will be preferably, but not limited to, ceramic, porcelain, natural or artificial stone, stone or wood or resins aggregate. In other words, a main face of the block has as a finishing material one of the above cited materials, being formed completely by a single cladding panel, or by a plurality of cladding panels, attached to the body of insulating material.

[0012] Likewise, it is contemplated that both main faces of the block have a cladding panel of the same or a different material, with a finish provided by one or more cladding panels, although according to a preferred embodiment, each main face provided with cladding is formed by a single, preferably ceramic, cladding panel.

[0013] Furthermore, it is proposed that the volume of the at least one cladding panel providing the covering for one and the same main face represents at most 25% of the total volume of the block. Therefore, the cladding panel or panels cannot represent more than 25% of the block volume when only a main face has cladding, and said cladding panels cannot represent more than 40% of the block volume if both main faces have cladding, although the values will preferably be lower, such as 15%, for example, in the case of the cladding of one main face, and

a maximum of 30% in the case of the cladding of two main faces, or even 10% with the cladding of one face and 20% with the cladding of two faces.

[0014] Additionally, it is proposed that the proposed insulating block object of the present invention has, in a novel manner, the following characteristics:

- the distance existing between the main faces is at least 7 cm;
- the insulating material has a density comprised between 100 and 200 kg/m^3; having the insulating material a compressive strength of at least 100 kPa;

the body of insulating material of each block being able to withstand the weight of other identic superimposed blocks for the erection of a self-supporting wall at least 3 m high.

[0015] Optionally, the insulating material having a tensile strength perpendicular to the main faces of at least 20 kPA is also considered optimum.

[0016] The fact that the thickness of the block is greater than or equal to 7 cm allows the stability of a wall built by means of said blocks to be suitable for the erection of walls at least 3 meters high. Furthermore, the low density of the insulating material, together with said thickness and the small proportion of the volume the cladding panels represent, assures that most of the block is formed by a highly insulating material, such that an enclosure erected by means of said blocks would offer very high thermal and acoustic insulation, allowing the use thereof as an enclosure for separating interior spaces and exterior spaces, complying with building regulations in this regard.

[0017] In addition, the compressive strength offered by the insulating material is high for low-density materials of this type, which allows said insulating material to take on functions of providing strength and transmitting forces produced by vertical loads. Specifically, the proposed block has been sized such that said body of insulating material can withstand by itself the weight of multiple blocks stacked on top of one another, forming a wall 3 m high or more.

[0018] For the erection of higher walls, it can be combined with retaining anchors for retention with respect to the ceiling, reinforcement anchors fixed between adjacent blocks to reinforce their attachment, or in the case of using it as backing or as façade cladding, by means of reinforcement anchors attached to the contiguous wall which is being backed or clad.

[0019] Said concealed anchor will preferably be attached to the upper part of the block to be fixed and can consist, by way of example, of a member screwed to the wall to be clad having a planar end inserted between two superimposed blocks, said end being provided with protuberances which are inserted at least into the lower block, into its insulating material, the cavities or perforations provided in the rigid cladding, preferably in the protruding ribs, such that said anchor is concealed from the exposed main face of the wall of insulating blocks.

[0020] This feature allows the mentioned wall to be stable and self-supporting regardless of the structural contribution the cladding panels may offer, the insulating material being what performs the structural function, which allows said cladding panels to be placed only on one of the main faces of the block, for example, making it unnecessary to place said cladding on the other main face of the blocks for structural reasons.

[0021] Therefore, the essential function of said cladding panel is not a structural function, but rather the function of offering protection against fire, improving the acoustic insulation of specific frequencies, making the blocks rigid, and serving as a support for the correct adherence of tiles, texture coatings or plasters or lightweight laminated wood or plaster paneling to said wall, and also serving as a support to allow a firm anchoring of supports of any type anchored to the wall by means of screws, such as shelves, cupboards, hangers, drawings, lights, etc., which as a result of said cladding panel can be placed at any point of the wall offering correct force distribution and high localized strength around said screw.

[0022] The cladding panel also has a decorative function, said cladding panels being provided with an aesthetic treatment.

[0023] According to an optional, additional embodiment, the insulating material is a rigid fiberboard panel, rendering optimum insulating and strength properties, as well as desirable transpiration and waterproofing capacities. It is also an interesting material from the ecological viewpoint as it is natural, can be recycled and has a low environmental impact. Nevertheless, the use of other insulating materials, such as polystyrene, for example, is also contemplated.

[0024] Additionally, it is proposed that said body of insulating material maintains it capacity to support the weight of other identical superimposed blocks for the erection of self-supporting walls at least 3 m high, after undergoing a reduction of its resistant section of at most 25% by means of a horizontal chase arranged horizontally along a main face of the block, interrupting vertical load transmission through the cladding panel. In this case, the remaining 75% of the block, which can be formed only of insulating material, is capable of withstanding the vertical loads caused by the weight of the blocks placed above said chase, until completing the at least 3 m wall.

[0025] This feature indicates that the resistant capacity of the body of insulating material is inflated to allow said body of insulating material to maintain the structural stability of the wall even after making a chase or raggle that crosses one of the main faces of the block from side to side, eliminating the vertical continuity of the at least one cladding panel of said main face, and therefore making vertical load transmission through said cladding panel impossible, and also reducing the resistant section of the body of insulating material.

[0026] Therefore, a self-supporting wall built from in-

sulating blocks such as those proposed and having a horizontal chase crossing one of its faces will remain stable as a result of the resistive action of the bodies of insulating material of the blocks. The possibility of including ducts inside the insulating material for electrical installations during manufacture is also contemplated, the need to make chases being prevented.

[0027] Likewise, it is proposed that the perimetral faces of each block have tongue and groove configurations, which allows a tongue and groove coupling between identical blocks arranged laterally adjacent to or vertically superimposed on one another, even if they are placed laterally shifted with respect to one another, as is common in the construction of walls. These tongue and groove configurations provide correct block alignment, optimum load transmission and quick and easy assembly, in addition to improving air-tightness and water-tightness. The assembly of the wall without using binders, but rather by simple insertion of parts with respect to one another, which allows dry construction and recoverable and reusable blocks, can even be considered. The dry attachments can be reinforced with side nailing between adjacent blocks and/or with connectors for connecting to the contiguous façade support, in the case of using the proposed block for the erection of outer backings or claddings.

[0028] In another envisaged embodiment, said at least one cladding panel is arranged on only one of the main faces of the block, the opposing main face being free of any cladding panel and therefore with the insulating material visible; in contrast, in another embodiment especially envisaged for the erection of insulated walls said at least one cladding panel is arranged on the two main faces of one and the same block, which allows giving rise to a wall made of self-supporting insulating blocks with both exposed faces clad with cladding panels.

[0029] According to another proposed additional feature, each cladding panel has protruding ribs on its face which is in contact with the body of insulating material, said protruding ribs being preferably oriented vertically or horizontally in the assembly positionTherefore, according to said embodiment the cladding panel and the body of insulating material are attached to one another by means of the friction existing between said protruding ribs and complementary grooves provided in the body of insulating material in which said protruding ribs are snap-fitted, which allows a manufacturing operation which is free of toxic chemical compounds which are typically present in adhesives and can release toxic gases or be hazardous in the event of a fire.

[0030] To assure correct attachment, it is envisaged that the mentioned protruding ribs have a Tor dovetail-shaped section, which provides a stronger attachment.

[0031] However, the attachment or the reinforcement of the attachment between the cladding panel and the body of insulating material by means of adhesives is also contemplated.

[0032] Optionally, it is also proposed that the cladding panel integrates, coinciding with the main face of the block, a finishing surface layer of a material other than the material forming the cladding panel. Said material will preferably be gypsum for the purpose of pre-plastering the wall built by means of the insulating blocks; it would only be necessary to later join the attachments between the different blocks of the wall again for obtaining a completely plastered wall ready to be painted.

[0033] It is also proposed that said cladding panels have a plurality of parallel weakening lines, provided to make it easier to break apart or cut said cladding panel following said weakening lines. This feature allows an operator to cut the body of insulating material, which can be easily cut by means of a blade or a hand or electric saw, and then break apart the cladding panel by simple bending, or cut it by means of tools having low power or low penetration capacity, because it would only be necessary to go through the thickness of said cladding plate.

[0034] Said weakening lines will preferably be lines for thinning out the material by means of fine grooves, either on its exposed face or on its face in contact with the insulating material.

[0035] By means of this feature, the block can be shortened to make it coincide with the size of the cavity in which it must be placed.

[0036] Optionally, additional weakening lines perpendicular to the other weakening lines will also be included.

[0037] The proposed block is envisaged for the erection of self-supporting walls, but it is also indicated for the erection of walls parallel to existing walls, preferably in a façade, at a small distance generating an air chamber, or even in direct contact. The thermal and acoustic insulation of the mentioned existing wall are improved by means of this construction. Said wall of insulating blocks can be placed both on the inside, as a backing, and on the outside, thereby simultaneously insulating said façade, protecting it from rain and the elements, and it can even provide the cladding material. In this embodiment, the façade outer cladding is contemplated both for a newly built building and for improving the thermal insulation of an old building, but in both cases it is proposed to include a plurality of connectors, or concealed anchors, anchoring said wall of insulating blocks to said façade to better withstand horizontal forces caused by the wind, whereas vertical forces are transmitted through the superimposed blocks. Said concealed anchors can also be included in the backed walls to improve the resistance of said backed wall to possible horizontal forces.

[0038] The proposed material allows obtaining the advantages of a ceramic brick wall in terms of its impact resistance, capacity to support hanging elements such as shelves, its acoustic absorption of lower pitched sounds, its compatibility with other construction materials and techniques such as plastering, rendering, tiling, whitewashing, etc, and the absence of hollow sound when hit, as occurs with other constructive paneling solutions, as well as other advantages provided by the body of insulating material, such as its acoustic and thermal

insulation, the lightness of the blocks, the ease of cutting, etc. The foregoing, all of which is provided in a compact block of reduced thickness, allows obtaining all these advantages without having to place the insulation and then build an opposite wall, taking up a lot more space and time.

[0039] It will be understood that references to geometric position, such as, for example, parallel, perpendicular, tangent, etc., allow deviations of up to ±5° with respect to the theoretical position defined by said nomenclature.

[0040] Other features of the invention can be seen in the following detailed description of an embodiment.

Brief Description of the Drawings

[0041] The foregoing and other advantages and features will be better understood based on the following detailed description of an embodiment in reference to the attached drawings which must be interpreted in an illustrative, non-limiting and merely schematic manner, without any scale or proportion, in which:

Figure 1 shows an axonometric view depicting three blocks stacked in two rows, according to a first embodiment in which each block only has ceramic cladding on one of its main faces, and in which the blocks include a horizontal duct inserted in the insulating material during manufacture for electrical installations;

Figure 2 shows a vertical cross-section of a wall made of blocks with cladding on only one main face, in which a horizontal chase has been made on the main face covered with the ceramic covering, leaving only a portion of the resistant section of the body of insulating material, and said wall facing and being spaced from a brick wall, forming an air chamber between both, the wall of insulating blocks being fixed to the brick wall by means of a concealed anchor screwed onto the brick wall and inserted between two superimposed blocks, the concealed anchor having vertical studs inserted in the protruding ribs of the ceramic cladding;

Figure 3 shows an axonometric view such as that shown in Figure 1, but depicting blocks provided with ceramic covering on their two main faces, according to a second embodiment, the visible face of the cladding having parallel weakening lines in the form of small grooves making the gripping of mortar or gypsum easier, and also making the tasks of shortening the insulating block to a desired size easier.

Detailed Description of an Embodiment

[0042] Figure 1 shows an illustrative, non-limiting embodiment, according to which the proposed insulating block has two planar, parallel main faces 10 separated by a distance of at least 7 cm, said main faces 10 being connected by four side faces 11 intended for laterally connecting the blocks to one another.

[0043] The proposed block is formed by a rigid body of insulating material 20 made of fiberboard with a density of between 100 and 200 kg/m^3 and a compressive strength of at least 100 kPa, being able to reach 150 kPa. It will be understood that the use of other different materials is also contemplated in the present invention.

[0044] These mechanical properties of the body of insulating material, along with its width, give it high insulating capacity and mechanical properties allowing it to withstand the weight of a plurality of superimposed blocks for building a wall at least 3 m high. This combined with the stability provided by having a width of at least 7 cm allow erecting self-supporting walls up to 3 m high.

[0045] According to the present embodiment, said body of insulating material has maximum dimensions of 40 cm long by 20 cm high by 9 cm wide, these dimensions being able to be different without affecting the proposed invention, provided that the width is enough to assure structural and insulating capacities of the body of insulating material.

[0046] In the present example, one of the main faces 10 of the block is formed by a cladding panel 21 attached to the body of insulating material 20. Since the body of insulating material is responsible for supporting the vertical loads of a wall made up of said blocks, the ceramic cladding panel does not have to bear vertical loads, and this allows the block to only include cladding panel on one of its main faces 10, in those uses in which only one of the main faces 10 of the blocks is exposed, and said cladding can be very thin.

[0047] Examples of those uses are the erection of façade backing walls for the purpose of providing insulation thereto, or covering the outer face of the façade by means of a wall erected by means of said blocks is also contemplated. In both cases, the main face of the blocks which is facing said façade wall does not require a cladding panel as it will not be accessible after completing the wall of insulating block. In contrast, the other main face 10 will indeed be accessible, so it must be covered by means of the mentioned cladding panel.

[0048] According to a preferred embodiment, the body of insulating material 20 will be sized so that it can support the vertical loads of a 3 m high wall, even in the case in which a chase 23 is made horizontally going through a main face 10 of the block, such as that shown in Figure 2, interrupting the vertical continuity of the cladding panel 21, and in which the resistant section of the body of insulating material 20 is reduced to 20%.

[0049] However, it has also been proposed that each block includes a duct 24 inside the insulating material 20, included while manufacturing the block, said ducts 24 of adjacent coaxial blocks being able to be connected to one another in an assembly position, allowing electrical installations through said ducts 24 without having to make said chases 23.

[0050] Therefore, it is optionally proposed that each block includes one or more inner ducts 24 going through

said block from one side face 11 to the other opposite side face 11, either horizontally or vertically. Said inner ducts 24 are provided for electrical installations through said blocks. As shown in Figure 3, it is also contemplated that each block has cladding panels 21 covering its two main faces 10. In this case, a block is considered suitable for the erection of self-supporting insulating walls separated from other walls, for example, partitioning walls between two adjacent interior spaces, or for the erection of walls for interior and exterior separation without requiring any other additional wall, the block alone providing all the properties required for the separation of interior and exterior spaces in terms of acoustic and thermal insulation, waterproofing, vapor barrier, etc.

[0051] It is proposed that said cladding panel is made of a ceramic material, giving the block the advantages of brick construction, in addition to the insulating properties of the proposed body of insulating material.

[0052] Said advantages include protection of the insulating material against fire, acoustic insulation against specific frequencies not absorbed by the insulating material, a hard continuous finish that is resistant to impacts and blows, and a finish capable of supporting and distributing high point loads such as those caused by the anchoring of screws, for example, screws for holding a shelf. The ceramic material also provides an ideal substrate for plastering, texture coating, adhering tiles, coating, whitewashing, etc., in such case the inclusion of horizontal striations being preferable to make the gripping of these materials easier (see Figure 3), and it is also a material suitable both for indoors and outdoors as it is resistant to the elements.

[0053] These properties are not exclusive to ceramic, and they can therefore also be obtained by means of cladding panels 21 made of other materials, such as wood, stone, particleboard, resins, etc.

[0054] It is also proposed that the cladding panel includes a finish of a different material, for example, a layer of gypsum, or glazing on the main face 10. Said finishes provide additional properties or just a more pleasant finish that can be visible without additional work.

[0055] The cladding panel 21 and the body of insulating material 20 are attached to one another in the present embodiment by means of the geometric interference existing between preferably parallel and vertical protruding ribs 40 which project from the cladding panel 21 on its face which is in contact with the body of insulating material 20 and are inserted in complementary grooves provided in said body of insulating material 20. Both the ribs and the grooves in this example have a dovetail configuration, giving them a firm anchoring without needing to use adhesives.

[0056] Regardless of the elasticity of the insulating material 20 used, the coupling of the insulating material 20 with the cladding panel 21 can be by snap-fitting or by lateral sliding from the ends of the block between the body of insulating material 20 and the cladding panel 21.

[0057] The side faces 11 of each block have complementary tongue and groove configurations 30 allowing the connection between blocks stacked on or arranged laterally adjacent to one another. Said connection assures correct air-tightness of these joints, which improves the insulating properties of the block, and makes the use of binding material unnecessary, allowing dry construction. Optionally, the inclusion of attachment parts inserted simultaneously in several adjacent blocks, which allow reinforcing said attachment, can be proposed. Said attachment parts can consist, by way of example, of metal or plastic elements provided with teeth or legs that are simultaneously inserted or put into the bodies of insulating material 20 or the rigid cladding 21 of several adjacent blocks.

[0058] Optionally, in the case of the erection of façade or soffit claddings parallel to an existing wall, it is contemplated that said wall of insulating blocks is connected to said existing wall by means of concealed anchors 50 conferring resistance to horizontal forces, shown in Figure 2, according to an embodiment in which they consist of a thin bent metal strip fixed to the existing wall by means of screws, and sandwiched between two superimposed insulating blocks, the concealed anchor 50 being connected to said insulating blocks by means of vertical lugs which are inserted into complementary cavities provided in the protruding ribs on the rear face of the cladding 21, thereby being anchored and concealed.

Claims

1. An insulating block for the erection of walls including:

- two parallel main wall faces (10) surrounded and connected to one another by means of four perimetral faces (11);
- a body of insulating material (20);
- at least one cladding panel (21) of rigid material attached to the body of insulating material (20), said cladding panel (21) forming at least one main face (10) of the block;
- said at least one cladding panel (21) covering a main face (10) taking up less than 25% of the block volume;

characterized in that

- the distance existing between the main faces (10) is at least 7 cm;
- the insulating material (20) has a density of between 100 and 200 kg/m^3; and the insulating material (20) has a compressive strength of at least 100 kPa;

the body of insulating material (20) of each block is able to withstand the weight of other superimposed identic blocks for the erection of a self-supporting wall at least 3 m high.

2. The insulating block according to claim 1, **characterized in that** the its constitutive materials include at least one selected among:

rigid fiberboard panel as an insulating material (20);
rigid board of polystyrene as an insulating material (20);
ceramic panel as a cladding panel (21)
stone panel as a cladding panel (21);
artificial stone panel as a cladding panel (21)
stone or wood agglomerated panel as a cladding panel (21);
wood panel as a cladding panel (21)
resin panel as a cladding panel (21).

3. The insulating block according to claim 1 or 2, **characterized in that** said body of insulating material (20) maintains its capacity to support the weight of other identic superimposed blocks for the erection of self-supporting walls at least 3 m high after undergoing a reduction of its resistant section of at most 25% of the thickness thereof by means of a horizontal chase arranged horizontally along a main face (10) of the block, interrupting vertical load transmission through the cladding panel (21).

4. The insulating block according to claim 1, 2 or 3, **characterized in that** said perimetral faces (11) have tongue and groove configurations (30), allowing a tongue and groove coupling between identical blocks arranged laterally adjacent to and/or superimposed on one another.

5. The insulating block according to any one of the preceding claims, **characterized in that**

• said at least one cladding panel (21) is arranged on only one of the main faces (10) of the block; or **in that**
• said at least one cladding panel (21) is arranged on the two main faces (10) of the block.

6. The insulating block according to any one of the preceding claims, **characterized in that** said at least one cladding panel (21) is a ceramic panel and including:

• vertically or horizontally oriented protruding ribs (40) on its face in contact with the body of insulating material (20); or
• vertically or horizontally oriented protruding ribs (40) with a T-shaped section on its face in contact with the body of insulating material (20); or
• vertically or horizontally oriented protruding ribs (40) with a dovetail-shaped section on its face in contact with the body of insulating material (20).

7. The insulating block according to claim 6, **characterized in that** the cladding panel (21) and the body of insulating material (20) are attached to one another by means of the friction existing between said protruding ribs (40) and complementary grooves provided in the body of insulating material (20) into which said protruding ribs (40) are snap-fitted; and/or by means of adhesives.

8. The insulating block according to any one of the preceding claims, **characterized in that** the cladding panel (21) integrates a finishing surface layer of a material other than the material forming said cladding panel (21).

9. The insulating block according to claim 8, **characterized in that** the finishing surface layer is of gypsum.

10. The insulating block according to any one of the preceding claims, **characterized in that** each main face (10) including cladding panel (21) is totally formed by a single cladding panel (21).

11. The insulating block according to any one of the preceding claims, **characterized in that** it includes vertical and/or horizontal internal ducts (24) for electric instalations.

12. The insulating block according to any one of the preceding claims, **characterized in that** the cladding panel (21) has a plurality of parallel weakening lines, provided to make it easier to break apart or cut said cladding panel (21) following said weakening lines.

13. An insulating wall **characterized in that** it is made of blocks such as those described in any one of preceding claims 1 to 12, stacked such that they are vertically superimposed on and connected to one another, their respective main faces (10) being coplanar.

14. The insulating wall according to claim 13, **characterized in that** it is arranged parallel and adjacent to an existing wall by means of its inner face and/or by means of its rear face.

15. The insulating wall according to claim 14, **characterized in that** it includes concealed anchors (50), anchoring said wall of insulating blocks to said existing wall to transmit horitzontal forces from the isolating wall to the existing wall, being said concealed anchors (50) fixed to the isolating material (20) or to the cladding panel (21) of the isolating blocks.

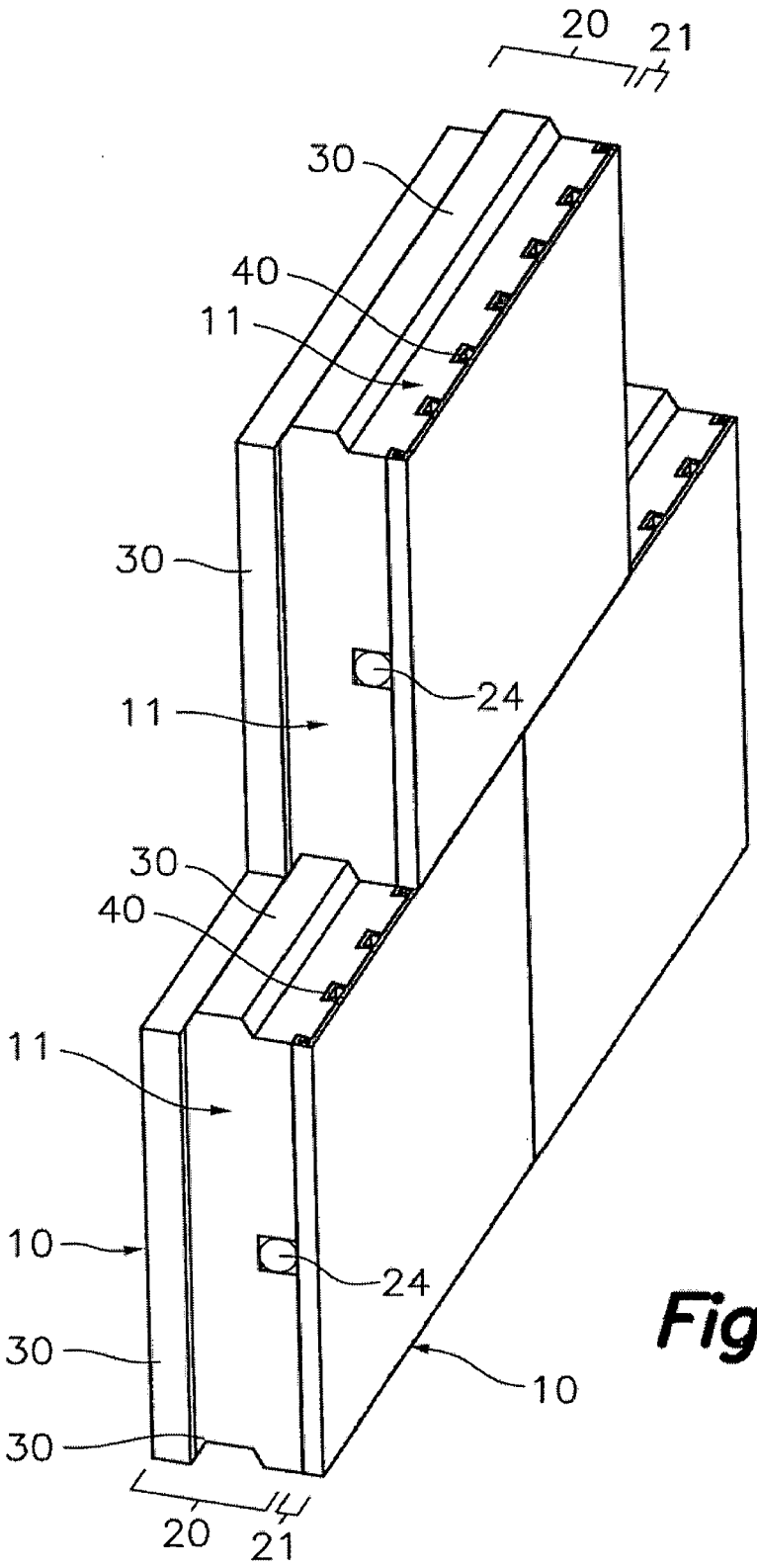

Fig. 1

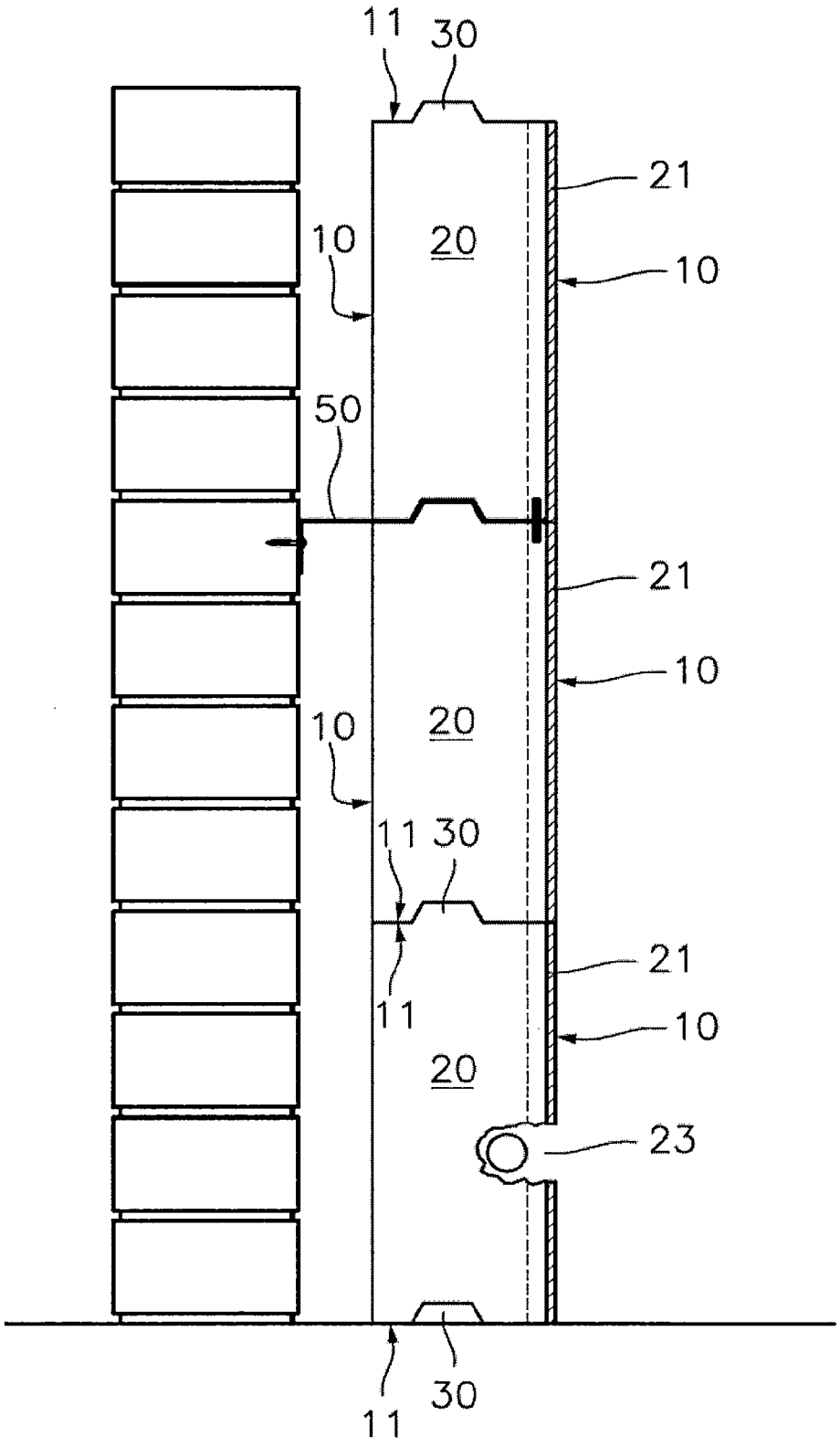

Fig.2

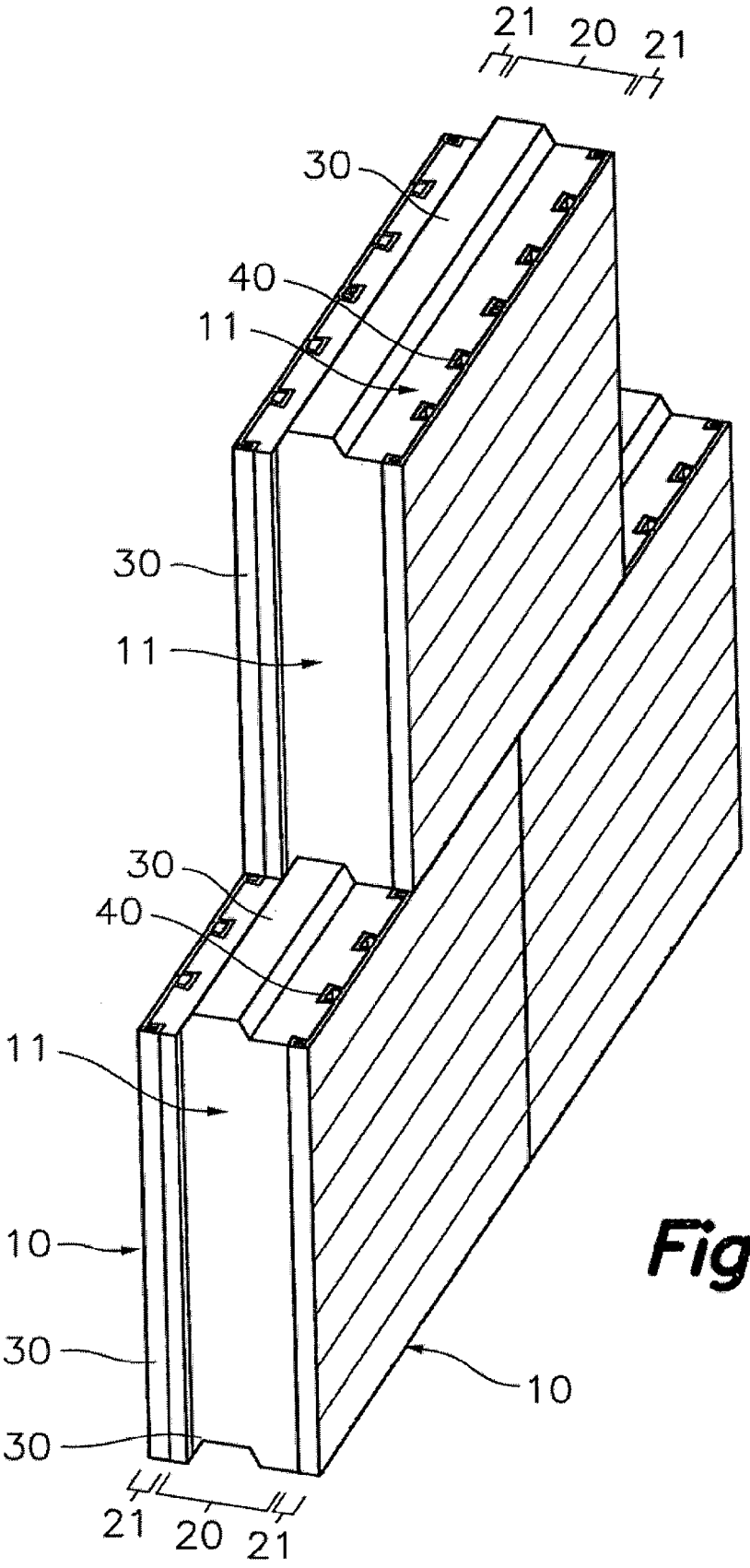

Fig.3

Europäisches Patentamt
European Patent Office
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EUROPEAN SEARCH REPORT

Application Number
EP 16 38 2308

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Place of search	Date of completion of the search	Examiner
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