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(54) **BUILDING BLOCK FOR A FOUNDATION**

(57) A building block is disclosed. The building block in the orientation intended during use comprises:

- a first block;
- a second block;
- an insulation block;

wherein the insulation block is being arranged between the first block and the second block;

wherein the building block is having an extension in a longitudinal direction X; in a depth direction Y and in a

height direction Z;

wherein the building block accordingly comprises a number of distinct surfaces, which in pairs are being mutually separated by an edge.

The building block is characterized in that the building block comprises one or more channels, wherein one or more of these one or more channels define(s) a passage from one distinct surface to another distinct surface.

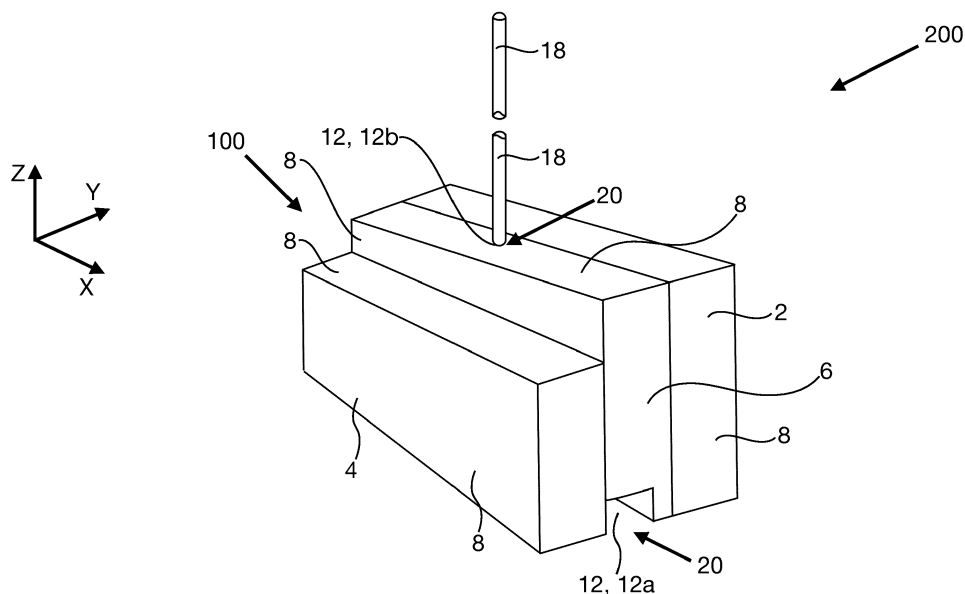


Fig. 9

Description

Field of the invention

[0001] The present invention relates in general to the field of constructions. More specifically, the present invention relates in a first aspect to a building block. In a second aspect the present invention relates to a building system comprising a plurality of building blocks, wherein one or more building blocks is a building block according to the first aspect of the invention. In a third and fourth aspect the present invention provides methods for the manufacture of a building block according to the first aspect of the invention. In a fifth aspect the present invention relates to the use of a building block according to the first aspect of the invention or of a building system according to the second aspect of the invention as building block(s) in a structure.

Background of the invention

[0002] For use in construction of a foundation of a wall, for example for a house, building blocks are known which comprise a first block, a second block and an insulation block which is being arranged between the first and the second block. By building the foundation of a building with these building blocks, improved insulation against cold from the outside environment is attained due to the presence of the insulation block between the first and the second block. In some applications of this building block more layers of building blocks may be arranged on top of each other, wherein the upper layer of building blocks comprises the referred building block in an embodiment in which the first block is having the same height as the insulation block and wherein the second block is having a lower height. By letting the second block with a lower height face the interior of the building, a concrete floor may be cast over this lower, second block and hereby good insulation against influx of cold from the outside can be attained. The referred building block is disclosed in Danish utility model application DK 2011 00144 U3.

[0003] Radon is an invisible gas having no taste or smell which occurs naturally in the underground. Radon is having a density at standard pressure and temperature of 9.73 g/l. Although radon is having a density which is greater than the density of atmospheric air (1.2 g/l), radon nevertheless has a tendency to rise from the interior of the Earth.

[0004] The radon level in the ground may vary geographically, depending on the composition of the ground. The radon level may vary within the same municipal borders and even between two neighboring houses, due to the impact of the construction, condition and ventilation of the houses.

[0005] As radon is radioactive, exposure to radon over prolonged periods of time will imply a health hazard. Therefore, a general interest in reducing the exposure to radon for human beings exists. Radon is able to penetrate

into a building through cracks and crevices facing soil because a lower air pressure usually is present inside a building compared to beneath a building.

[0006] Accordingly, a higher radon level will always be present in the indoor air compared to the outdoor air. The higher radon level in the indoor air, the higher the risk of harm to the health, such as lung cancer. Hence, any reduction in radon level is beneficial.

[0007] In the Danish building regulation, requirements are made that new houses must be secured against radon to such an extent that the level of radon in the indoor air does not exceed 100 Bq/m³.

[0008] Although a steel reinforced concrete floor having a thickness of 100 mm or more generally is being considered to be impermeable to radon, this is only true to the extent that the concrete floor is without any cracks or crevices. Such cracks or crevices will eventually form over time, which thereby implies penetration of radon from the underground and up through the floor in a house having a concrete floor.

[0009] Accordingly, a need exists for a technology which may contribute in reducing the radon level in the interior of a building, for example by removing radon which has entered from the underground into the area below a floor of a building.

[0010] It is an objective of the present invention in its various aspects to provide such technology which may contribute to a reduction in the radon levels in the interior of a building.

Brief description of the invention

[0011] This objective is fulfilled according to the invention in its various aspects.

[0012] Accordingly, the present invention in a first aspect relates to a building block wherein the building block in the orientation intended during use comprises:

- a first block;
- a second block;
- an insulation block;

wherein the insulation block is being arranged between the first block and the second block; wherein the building block is having an extension in a longitudinal direction X; in a depth direction Y and in a height direction Z;

wherein the building block accordingly comprises a number of distinct surfaces, which in pairs are being mutually separated by an edge; characterized in that the building block comprises one or more channels, wherein one or more of these one or more channels define(s) a passage from one distinct surface to another distinct surface.

[0013] In a second aspect according to the present invention, a building system is provided, comprising a plu-

rality of building blocks, wherein one or more building blocks each is being a building block according to the first aspect of the invention.

[0014] In a third aspect the present invention provides a method for the manufacture of a building block according to the first aspect of the invention, comprising the steps of:

a) providing a first block, a second block and an insulation block in the desired dimensions in such a way that the building block upon assembly will define the channel or the channels;

b) assembling the first block, the second block and the insulation block in such a way that the insulation block is being arranged between the first block and the second block; wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws;

c) awaiting the glue or adhesive to cure, in case glue or adhesive is being employed;

[0015] In a fourth aspect the present invention provides a method for the manufacture of a building block according to the first aspect of the invention, comprising the steps of:

a) providing a first block, a second block and an insulation block in the desired dimensions;

b) assembling the first block, the second block and the insulation block in such a way that the insulation block is being arranged between the first block and the second block; wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws;

c) awaiting the glue or adhesive to cure, in case glue or adhesive is being employed.

d) forming the channel or the channels in the building block, e.g. by drilling and/or milling material.

[0016] In a fifth aspect the present invention provides a use of a building block according to the first aspect of the invention, or of a building system according to the second aspect of the invention as building block(s) in a structure.

[0017] The present invention in its various aspects may contribute to removal of radon in the interior of a building, hence leading to a more healthy indoor climate.

Brief description of the drawings

[0018]

Fig. 1a is a perspective view illustrating a prior art building block.

Fig. 1b is a cross-sectional view of a prior art wall/floor construction.

Fig. 2a is a perspective view of an embodiment of a building block according to the present invention.

Fig. 2b is a cross-sectional view of the embodiment of Fig. 2a.

Fig. 3 is a cross-sectional view of another embodiment of a building block according to the present invention.

Fig. 4 is a cross-sectional view of yet another embodiment of a building block according to the present invention.

Fig. 5 is a cross-sectional view of an alternative embodiment of a building block according to the present invention.

Fig. 6 is a cross-sectional view of yet another alternative embodiment of a building block according to the present invention.

Fig. 7a is a cross-sectional view of yet another alternative embodiment of a building block according to the present invention.

Fig. 7b is a cross-sectional view of the building block illustrated in fig. 7a.

Fig. 8a is a perspective view of a design of a building block according to the present invention, serving to form an inner corner of a foundation.

Fig. 8b is a perspective view of a design of a building block according to the present invention, serving to form an outer corner of a foundation.

Fig. 9 is a perspective view illustrating a building system according to the present invention.

Detailed description of the invention

[0019] The present invention accordingly in a first aspect relates to a building block, wherein the building block in the orientation intended during use comprises:

- a first block;
- a second block;
- an insulation block;

wherein the insulation block is being arranged between the first block and the second block;

wherein the building block is having an extension in a longitudinal direction X; in a depth direction Y and in a height direction Z;

wherein the building block accordingly comprises a number of distinct surfaces, which in pairs are being mutually separated by an edge;

characterized in that the building block comprises one or more channels, wherein one or more of these one or more channels define(s) a passage from one distinct surface to another distinct surface.

[0020] As the building block according to the first aspect of the present invention is being provided with one or more channels, the building block allows for leading radon, which has been accumulated beneath a floor in a building, from the building and out into the open.

[0021] Hereby the quality of the indoor climate in a building using the described building blocks can be increased.

[0022] The term "in the orientation intended during use" as employed in the present description and in the appended claims may be construed to mean that the building block is being arranged in such a way that its lower surface or at least a part thereof defines a horizontal plane and in such a way that the outer surfaces of the first and the second block, respectively, are oriented vertically.

[0023] The term "distinct surface" as employed in the present description and in the appended claims may be construed to mean a part of the total surface of the building block, where this part of the surface is being separated from other parts of the surface of the building block by one or more edges.

[0024] The term "the interior of a building" as employed in the present description and in the appended claims may be construed to mean the volume which is being defined within the outer walls of the building, including the volume, which is being defined within the foundation of the building.

[0025] An edge may be an inside edge which accordingly defines a concave boundary between two distinct surfaces. The term "concave" as employed in the present description and in the appended claims may be construed to mean that the angle between two such distinct surfaces, being separated by said edge, lies in the range of $[0; 180^\circ]$. Typically, the angle between two distinct surfaces at a concave edge will be approximately 90° .

[0026] An edge may also be an outside edge which accordingly defines a convex boundary between two distinct surfaces. The term "convex" as employed in the present description and in the appended claims may be construed to mean that the angle between two such distinct surfaces, being separated by said edge, lies in the range of $[180; 360^\circ]$. Typically, the angle between two distinct surfaces at a convex edge will be approximately 270° .

[0027] In a preferred embodiment of the building block

according to the first aspect of the invention a first interface is being defined between said insulation block and said first block, and a second interface is being defined between the insulation block and the second block, wherein the first interface and the second interface each is oriented in an XZ-plane.

[0028] Hereby is attained that the insulation block becomes vertically oriented, thereby implying that a thermal insulation between a buildings interior and exterior environment most efficiently is provided.

[0029] In a preferred embodiment of the building block according to the first aspect of the invention, said first block and/or said second block comprise(s) a mineral material, such as clay, cement, concrete.

[0030] These materials have proven beneficial for the intended purpose for use in a building block.

[0031] In a preferred embodiment of the building block according to the first aspect of the invention said insulation block comprises a porous or foamed material, such as a mineral wool or glass wool; or polystyrene or polyurethane.

[0032] These materials have proven beneficial for the intended purpose for use as thermal insulation in a building block.

[0033] In a preferred embodiment of the building block according to the first aspect of the invention one or more of the channels extend from the one distinct surface of the building block to the other distinct surface of the building block, partly or completely within the interior of the building block.

[0034] In a preferred embodiment of the building block according to the first aspect of the invention one or more of the channels extend from the one distinct surface of the building block to the other distinct surface of the building block partly or completely along a part of a distinct surface of the building block.

[0035] These two embodiments may be advantageous, each in its own way.

[0036] In a preferred embodiment of the building block according to the first aspect of the invention one or more of the channels independently extend through at least a part of the first block and/or at least through a part of the second block and/or at least through a part of the insulation block.

[0037] In some embodiments in which high strength is preferred it will be beneficial, as far as possible, to let the channel or one or more of its individual channel sections extend in the insulation block.

[0038] Alternatively, the channel or one or more of its individual channel sections extend in the first block or in the second block.

[0039] In other cases, it may be advantageous to let the channel extend in the first block and/or in the second block.

[0040] In a preferred embodiment of the building block according to the first aspect of the invention the first block and/or the second block and/or the insulation block, once the presence of the channel(s) is disregarded, forms a

right angled parallelepipedum.

[0041] Hereby, box-shaped building blocks are attained which traditionally are easiest to use for constructions.

[0042] The term "once the presence of the channels is disregarded" as employed in the present description and in the appended claims may be construed to mean that one imagines the channel being filled with material in such a way that the geometrical figure hereby provided, is being a right angled parallelepipedum.

[0043] In a preferred embodiment of the building block according to the first aspect of the invention the building block is having such a shape that a cross-section of the building block in the XY-plane, at least a given specific height level, and preferably at any height level of the building block, defines a rectangle, or defines a trapeze-form, wherein two angles of this trapeze-form are right-angled, and wherein other two angles of this trapeze-form are not right-angled.

[0044] Hereby a building block is attained which is either box-shaped or trapeze-shaped. These two embodiments are beneficial for building a foundation for a structure.

[0045] In a preferred embodiment of the building block according to the first aspect of the invention the extension H_1 in the height direction Z of the first block, the extension H_2 in the height direction Z of the second block and the extension H_3 in the height direction Z of the insulation block essentially are the same.

[0046] In a preferred embodiment of the building block according to the first aspect of the invention the extension H_1 in the height direction Z of the first block, the extension H_3 in the height direction Z of the insulation block essentially are the same; and the extension H_2 in the height direction Z of the second block is smaller than the extension H_1 in the height direction Z of the first block.

[0047] These two embodiments are suitable for use as an upper or non-upper building block for a foundation, respectively. In the latter case, the lower height of the second block allows that a floor can be arranged or cast on top of this lower, second block.

[0048] In a preferred embodiment of the building block according to the first aspect of the invention the extension L_1 in the longitudinal direction X of the first block, the extension L_2 in the longitudinal direction X of the second block and the extension L_3 in the longitudinal direction X of the insulation block essentially are the same.

[0049] In a preferred embodiment of the building block according to the first aspect of the invention the extension L_1 in the longitudinal direction X of the first block, and the extension L_2 in the longitudinal direction X of the second block essentially are the same; and wherein the extension L_3 in the longitudinal direction X of the insulation block is larger than the extensions L_1 , L_2 in the longitudinal direction X of the first block and the second block, respectively.

[0050] By providing the building blocks with a middle insulation block having a larger longitudinal extension

than the first block and the second block it is assured that upon building a foundation, heat bridges can be avoided, because it is possible for the insulation block of one building block to fully abut the insulation block of an adjacent building block.

[0051] In a preferred embodiment of the building block according to the first aspect of the invention the first block is having an extension D_1 in the depth direction Y, and the second block is having an extension D_2 in the depth direction Y; and the insulation block is having an extension D_3 in the depth direction Y; wherein $D_1 = D_2 = D_3$; or wherein $D_1 < D_2 = D_3$; or wherein $D_1 = D_2 < D_3$; or wherein $D_1 < D_2 < D_3$.

[0052] These mutual ratios between thicknesses of the first block, the second block and the insulation block, respectively, allow various embodiments for the building block. For instance, it may in respect of insulative reasons be advantageous to let D_3 be relatively large.

[0053] In a preferred embodiment of the building block according to the first aspect of the invention the insulation block is being fastened to the first block and/or to the second block with adhesive or glue; and/or the insulation block is being mechanically fastened to the first block and/or to the second block, such as with bolts or screws.

[0054] In a preferred embodiment of the building block according to the first aspect of the invention the first block forms a right angled parallelepipedum, and the second block and the insulation block are L-shaped.

[0055] This embodiment is suitable, when the building block is for use for an inside corner.

[0056] In a preferred embodiment of the building block according to the first aspect of the invention the first block and the insulation block are L-shaped, and the second block forms a right angled parallelepipedum.

[0057] This embodiment is suitable when the building block is for use for an outside corner.

[0058] In a preferred embodiment of the building block according to the first aspect of the invention the building block comprises a channel which extends in the longitudinal direction X between two opposite, distinct end-surfaces of the building block.

[0059] In a preferred embodiment of the building block according to the first aspect of the invention the building block comprises a channel comprising two channel sections, wherein the first channel section extends in the longitudinal direction X between two opposite, distinct end-surfaces of the building block; and wherein second channel section extends in the depth direction Y from an outer, distinct surface of the second block to the first channel section in such a way that the first channel section is connected to the second channel section.

[0060] In a preferred embodiment of the building block according to the first aspect of the invention the building block comprises a channel comprising two channel sections, wherein the first channel section extends in the height direction Z from an outer, upper distinct surface of the building block and a portion into the interior of the building block; and wherein second channel section ex-

tends in the depth direction Y from an outer, distinct surface of the second block to the first channel section in such a way that the first channel section is connected to the second channel section.

[0061] In a preferred embodiment of the building block according to the first aspect of the invention the building block comprises a channel comprising two channel sections, wherein the first channel section extends in the longitudinal direction X between two opposite, distinct end-surfaces of the building block; and wherein the second channel section extends in the height direction Z from an outer, upper distinct surface of the building block and a portion into the interior of the building block in such a way that the first channel section is connected to the second channel section.

[0062] In a preferred embodiment of the building block according to the first aspect of the invention the building block comprises a channel comprising three channel sections, wherein the first channel section extends in the longitudinal direction X between two opposite, distinct end-surfaces of the building block; and wherein the second channel section extends in the height direction Z from an outer, upper distinct surface of the building block and a portion into the interior of the building block in such a way that the second channel section is connected to the first channel section; wherein third channel section extends in the depth direction Y from an outer, distinct surface of the second block to the first channel section in such a way that the third channel section is connected to the first channel section.

[0063] In a preferred embodiment of the building block according to the first aspect of the invention the first channel section is connected to the second channel section and the third channel section.

[0064] In a preferred embodiment of the building block according to the first aspect of the invention the building block comprises a channel which extends in the depth direction Y between two opposite surfaces.

[0065] The above configurations for the extension of the channel serves different purposes as to in which direction, relative to the building block, the collected radon is to be conveyed.

[0066] In a preferred embodiment of the building block according to the first aspect of the invention one or more of the channel sections of the channel in the building block which extend(s) along the XZ-plane solely extend in the first block, in the second block or in the insulation block. Alternatively, this or these channel sections extend(s) in two or more of these three blocks.

[0067] In a preferred embodiment of the building block according to the first aspect of the invention the building block is a foundation block for a structure, such as a building block for a plinth for a structure.

[0068] The present invention relates in a second aspect to a building system comprising a plurality of building blocks, wherein one or more building blocks each is being a building block according to the first aspect of the invention.

[0069] In case the building system comprises a number of building blocks with a through-going channel or a through-going channel section, extending between to opposite, distinct surfaces, it may be preferred that two or more of these building blocks are uniformly designed so that upon arranging the building blocks following each other in a longitudinal direction it is achieved that the channel can be extended in a horizontal or vertical direction through these building blocks.

[0070] In a preferred embodiment of the building system according to the second aspect of the invention the building system comprises one or more ordinary building blocks, wherein each ordinary building block is being defined as a building block according to the first aspect of the invention, yet without the presence of any channel, and optionally with similar outer dimensions.

[0071] The term "ordinary building block" as employed in the present description and in the appended claims may accordingly be construed to mean a building block according to the first aspect of the first aspect, however with the difference that in respect of each channel and in each channel section appearing in the first block, the second block and/or the insulation block, respectively, this channel or this channel section instead comprises the material corresponding to the block in which the channel or the channel section is present.

[0072] In a preferred embodiment of the building system according to the second aspect of the invention the building system comprises a building block according to the first aspect of the invention, and additionally comprises a tube, wherein the outer dimension of the tube is being adapted to an opening of a channel or a channel section at an outer, upper distinct surface of the building block.

[0073] In a preferred embodiment of the building system according to the second aspect of the invention the tube is having a length of 75 - 650 cm, such as 100 - 600 cm, for example 150 - 550 cm, such as 200 - 500 cm, e.g. 250 - 450 cm or 300 - 400 cm.

[0074] The present invention provides in a third aspect a method for the manufacture of a building block according to the first aspect of the present invention comprising the steps of:

a) providing a first block, a second block and an insulation block in the desired dimensions in such a way that the building block upon assembly will define the channel or the channels;

b) assembling the first block, the second block and the insulation block in such a way that the insulation block is being arranged between the first block and the second block; wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws;

c) awaiting the glue or adhesive to cure, in case glue

or adhesive is being employed.

[0075] The present invention provides in a fourth aspect a method for the manufacture of a building block according to the first aspect of the present invention comprising the steps of:

a) providing a first block, a second block and an insulation block in the desired dimensions;

b) assembling the first block, the second block and the insulation block in such a way that the insulation block is being arranged between the first block and the second block; wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws;

c) awaiting the glue or adhesive to cure, in case glue or adhesive is being employed;

d) forming the channel or the channels in the building block, e.g. by drilling and/or milling material.

[0076] The present invention relates in a fifth to a use of a building block according to the first aspect of the invention, or of a building system according to the second aspect of the invention as building block(s) in a structure.

[0077] In a preferred embodiment of the use according to the fifth aspect of the present invention, the use is with the view to reduce the level of influx of radon into the interior of the building from an area below the floor of the building.

[0078] Referring now to the figures for illustrating the present invention, Fig. 1a is a perspective view showing a building block according to the prior art. The building block 300 shown in Fig. 1a, is disclosed in Danish utility model application DK 2011 00144 U3. The building block shown in Fig. 1a comprises a first block 302, a second block 304 and an insulation block 306, wherein the insulation block 306 is arranged between the first block 302 and the second block 304.

[0079] In Fig. 1a the building block 300 is shown in the orientation intended during use for building a foundation for a wall. As the insulation block is being arranged between an outer block 302 and an inner block 304, an improved insulation against outside cold is attained.

[0080] It is seen in Fig. 1a that the second block 304 is lower than the first block 302. Hereby an insulating and sturdy joint between a foundation and a cast floor is ensured. This is further illustrated in Fig. 1b.

[0081] Fig. 1b is a cross-sectional view of a wall/floor construction according to the prior art. Fig. 1b shows the wall/floor construction 310 comprising a building block 300 as described above and having a first, outer block 302, a second block 304 and an insulation block 306 being arranged therebetween. The building block 300 which forms part of a foundation is being arranged sub-

merged into soil 316.

[0082] It is seen that the inner block 304 is lower than the outer block 302. This enables casting a concrete floor 308 in the interior of the building with the building block 300 on top of loose, insulating gravel of expanded clay 312. On top of the floor 308 and the building block 300, respectively, a wall 300 may subsequently be constructed.

[0083] It is easily realized that in case the concrete floor over time will comprise cracks and crevices, radon will be able to leak from the underground and through the cracked or creviced concrete floor 308 and thereby will be able to penetrate into the interior 318 of the building.

[0084] The present invention eliminates this problem. This is illustrated in Fig. 2a - 9.

[0085] Fig. 2a is a perspective view illustrating an embodiment of a building block according to the present invention. The building block 100 in Fig. 2a comprises in the orientation intended during use: a first block 2, a second block 4 as well as an insulation block 6, wherein the insulation block 6 is being arranged between the first block 2 and the second block 4.

[0086] It is seen in Fig. 2a that the building block is having an extension in a longitudinal direction X; in a depth direction Y and in a height direction Z.

[0087] Accordingly, the building block comprises a number of distinct surfaces 8a, 8b, 8c, 8d, 8e, 8f, which in pairs are mutually separated by an edge 10. The edges 10 may be an outside edge 10a (convex) or it may be an inside edge 10b (concave).

[0088] It is moreover seen in Fig. 2a that the building block comprises a channel 12 which defines a passage from one distinct surface 8 to another distinct surface 8; in the actual case from the surface 8a to the surface 8f.

[0089] The channel 12 in the building block 100, which is shown in Fig. 2a accordingly extends from a first distinct end surface 8a to an opposite, distinct end surface 8f in a longitudinal direction and along a lower, outer surface of the insulation block 6.

[0090] This is further illustrated in Fig. 2b which shows the embodiment of Fig. 2a in a cross-sectional view.

[0091] Fig. 2b additionally shows that the first block 2 essentially has the same height H_1 as the insulation block H3, and that the second block is having a lower height H2.

[0092] Fig. 2b moreover shows that between the insulation block 6 and the first block 2 is defined a first interface 14, and that between the insulation block 6 and the second block 4 is defined a second interface 16, wherein the first interface 14, and the second interface 16 each are lying in the XZ-plane.

[0093] The building block illustrated in Fig. 2a and 2b allows that radon which is collected in the channel 12 can be removed from the building block and thereby from the foundation in case a plurality of such building blocks are arranged in a way following each other.

[0094] In order to allow the inventive building block illustrated in Fig. 2a and 2b to be able to convey radon

away from the interior of a building it is however necessary to assure that radon is being conveyed into the channel 12 of the building block in the first place.

[0095] This is possible with corresponding building blocks which comprise a channel extending from a distinct, outer surface on the second block and which is being connected to the channel 12 in the building block illustrated in Fig. 2a and 2b.

[0096] Such building blocks are shown in Fig. 3 and 6.

[0097] Fig. 3 is a perspective view of another embodiment of a building block according to the present invention.

[0098] In Fig. 3 shows the building block 100 comprising a channel 12 which in turn comprises two channel sections 12a, 12b, wherein the first channel section 12a extends in the longitudinal direction X between two opposite, distinct end-surfaces 8 of the building block, just like shown in respect of the building block of Fig. 2a and 2b. The second channel section 12b extends in the depth direction Y from an outer, distinct surface 8 of the second block 4 at an opening 20 to the first channel section 12a in such a way that the first channel section 12a is connected to the second channel section 12b.

[0099] It is realized that in case the building block 100 illustrated in Fig. 3 is being used for a foundation for a wall of a building in such a way that a concrete floor is being cast on top of the (inner) second block 4 (which is facing the interior of the building), wherein the supporting structure in the interior of the building (also referred to as the suction layer) first has been filled with loose gravel of expanded clay or other type of insulation, or additionally/alternatively is being built by means of EPS-radon board, then it can be achieved that radon, which is being present below the concrete floor, via channel section 12b will be able to flow to the channel section 12a, wherefrom it subsequently can be conveyed away from the building and away from the foundation. Fig. 6 is a perspective view illustrating another embodiment of for a similar building block according to the present invention.

[0100] In Fig. 6 shows that the building block 100 comprises a channel 12 which again comprises three channel sections 12a, 12b, 12c. The first channel section 12a extends in the longitudinal direction X between two opposite, distinct end-surfaces 8 of the building block, as shown in respect of the building block of Fig. 2a, Fig. 2b and Fig. 3.

[0101] The second channel section 12b extends in the height direction Z from an outer, upper distinct surface 8 of the building block and a portion into the interior of the building block to the first channel section 12a in such a way that the second channel section 12b is connected to the first channel section 12a.

[0102] The third channel section 12c extends in the depth direction Y from an outer, distinct surface 8 of the second block to the second channel section 12b in such a way that the third channel section 12c is connected to the first channel section 12a.

[0103] Also in respect of this embodiment of a building

block 100 it is possible to achieve, upon using the building block 100 as a foundation for a wall of a building, that radon may be removed from the area beneath a concrete floor, which has been cast partly on top of the second block 4 of the building block, because this radon via the channel section 12c can be conveyed to the channel section 12a. From the channel section 12a the radon may be removed in a horizontal direction via the channel section 12a itself or the radon may be removed in a vertical direction via the channel section 12b.

[0104] Fig. 4 and 5 illustrate further alternative embodiments of the building block according to the present invention.

[0105] Fig. 4 accordingly is a cross-sectional view of yet another embodiment of a building block according to the present invention.

[0106] Fig. 4 shows an embodiment of a building block corresponding to the building block illustrated in Fig. 6, however without the longitudinal channel section.

[0107] The building block in Fig. 4 comprises a channel comprising two channel sections 12a, 12b, wherein the first channel section 12a extends in a height direction Z from an outer, upper distinct surface 8 of the building block and a portion into the interior of the building block.

[0108] The second channel section 12b extends in the depth direction Y from an outer distinct surface 8 of the second block 4 to the first channel section 12a in such a way that the first channel section 12a is connected to the second channel section 12b.

[0109] In the building block in Fig. 4 the channel 12 extends from an outer, distinct surface 8 of the second block 4 to an upper, distinct surface 8 of the insulation block 6.

[0110] The building block 100 illustrated in Fig. 4 allows for leading radon away from the area beneath a concrete floor which has been cast partly on top of the second block 4 of the building block 100. From the channel section 12b the radon may be removed in the vertical direction via the channel section 12a.

[0111] Fig. 5 is a cross-sectional view showing yet another alternative embodiment of a building block according to the present invention.

[0112] In Fig. 5 is seen that the building block 100 comprises a channel 12 which in turn comprises two channel sections 12a, 12b, wherein the first channel section 12a extends in a longitudinal direction X between two opposite, distinct end surfaces 8 of the building block as illustrated in respect of the building block illustrated in Fig. 2a, 2b and 3.

[0113] The second channel section 12b extends in a height direction Z from an outer, upper distinct surface 8 of the building block and a portion into the interior of the building block in such a way that the first channel section 12a is connected to the second channel section 12b.

[0114] The building block 100 illustrated in Fig. 5 allows that radon being present in the channel section 12a can be removed in a vertical direction via the channel section 12a, for example by conveying it out in the open.

[0115] Fig. 6 is a cross-sectional view showing yet another embodiment of a building block according to the present invention.

[0116] Fig. 6 shows that the building block comprises a channel 12 which in turn comprises three channel sections 12a, 12b and 12c. The first channel section 12a extends in the longitudinal direction X between two opposite, distinct end-surfaces 8 of the building block as illustrated in respect of the building block shown in Fig. 2a, 2b and 3.

[0117] The second channel section 12b extends in the height direction Z from an outer, upper distinct surface 8 of the building block and a portion into the interior of the building block in such a way that the first channel section 12a is connected to the second channel section 12b.

[0118] The third channel section 12c extends in the depth direction Y from an outer surface 8 of the building block and into the building block to the first channel section 12a.

[0119] The building block 100 illustrated in Fig. 6 allows for conveying radon which is being collected beneath the concrete floor of a building, to the first channel section 12b via the third channel section 12c. From here, the radon may be removed either in a horizontal direction via the first channel section 12a, or else in a vertical direction via the second channel section 12b.

[0120] Fig. 7a is a cross-sectional view illustrating yet another alternative embodiment of a building block according to the present invention. Fig. 7b is a cross-sectional view illustrating an alternative embodiment of the building block illustrated in fig. 7a.

[0121] Fig. 7a shows that the building block 100 comprises a channel 12 extending in a depth direction Y between two opposite, distinct surfaces 8 of the building block, viz. the two surfaces corresponding to an inner surface of a foundation and the opposite, outer surface.

[0122] It is seen that the channel 12 extends in the interior of the building block.

[0123] Fig. 7b shows an alternative embodiment of the building block of Fig. 7a, in which the channel 12 extends along the bottom of the building block, the channel thereby not being completely surrounded by the material of the building block.

[0124] Fig. 8a is a perspective view of an embodiment of a building block according to the present invention which serves the purpose of forming an inner corner in a foundation.

[0125] It is seen in Fig. 8a that the building block 100 comprises a first block 2 which makes up a right angled parallelepipedum, and wherein the second block 4 and the insulation block 6 are L-shaped.

[0126] Hereby the building block will be suitable for forming an inner corner in a foundation. It is seen in Fig. 8a that the second block 4 at the surface 8 which will face the interior of the building, comprises an opening 20 to the channel 12. The channel 12 leads for example through the building block to the opposite, vertical surface of the first block 2. The latter surface accordingly will face

away from the interior of the finished building.

[0127] Fig. 8b is a perspective view illustrating an embodiment of a building block according to the present invention which serves the purpose of forming an outer corner in a foundation.

[0128] It is seen in Fig. 8b that the building block 100 comprises a first block 2 and an insulation block 6 which are both L-shaped. Moreover, the building block comprises a second block 4 which makes up a right angled parallelepipedum.

[0129] Hereby the building block will be suitable for forming an outer corner in a foundation. It is seen again in Fig. 8b that the second block 4 at the surface 8 which will face the interior of the building, comprises an opening 20 to the channel 12. The channel 12 leads for example through the building block to the opposite, vertical surface of the first block 2. The latter surface accordingly faces away from the interior of the finished building.

[0130] Fig. 9 is a perspective view of an embodiment of a building system according to the present invention.

[0131] Fig. 9 shows a part of a building system which comprises the building block 100 and the tube 18. The building block 100 is having a channel 12 comprising two channel sections 12a, 12b, as explained in respect of Fig. 5.

[0132] A tube 18 is arranged in the opening 20 which in turn is arranged in the upper surface 8 of the building block.

[0133] As more building blocks having a longitudinal channel, as the channel 12a illustrated in Fig. 9, are arranged following each other, radon, which is being collected beneath the concrete floor in a house, via a building block as illustrated in Fig. 3 or 6, can be conveyed into a longitudinal channel 12 extending in the longitudinal direction of the building block. In case one of the building blocks, which is being arranged following another, is a building block having a shape as illustrated in either Fig. 5, 6 or 9, one may arrange a tube 18 in the opening 20 of the channel 12 facing upward.

[0134] Hereby it is possible, along a foundation, to collect and remove radon from the building in a vertical direction.

[0135] In the upper end of the tube a ventilation device may be arranged, such as an air pump, which continuously will provide a suction in the channel 12 with the view to collect and remove radon from the building.

[0136] Such a ventilation device could also be arranged at other locations of the channel 12.

[0137] With the various aspects of the invention a more healthy inner climate can be secured in a building.

[0138] It should be understood that all features and achievements discussed above and in the appended claims in relation to one aspect of the present invention and embodiments thereof apply equally well to the other aspects of the present invention and embodiments thereof.

[0139] The present invention may in its various aspects be defined by the following clauses:

1. A building block (100), wherein the building block in the orientation intended during use comprises:

- a first block (2);
- a second block (4);
- an insulation block (6);

wherein the insulation block (6) is being arranged between the first block (2) and the second block (4); wherein the building block is having an extension in a longitudinal direction X; in a depth direction Y and in a height direction Z;

wherein the building block accordingly comprises a number of distinct surfaces (8,8a,8b,8c,8d,8e,8f), which in pairs are being mutually separated by an edge (10,10a,10b);

characterized in that the building block comprises one or more channels (12), wherein one or more of these one or more channels define(s) a passage from one distinct surface (8) to another distinct surface (8).

2. A building block (100) according to clause 1, wherein a first interface (14) is being defined between said insulation block (6) and said first block (2), and wherein a second interface (16) is being defined between the insulation block (6) and the second block (4), wherein the first interface (14) and the second interface (16) are oriented in an XZ-plane.

3. A building block (100) according to clause 1 or 2, wherein said first block (2) and/or said second block (4) comprise(s) a mineral material, such as clay, cement, concrete, such as Leca®.

4. A building block (100) according to any of the clauses 1 - 3, wherein said insulation block (6) comprises a porous or foamed material, such a mineral wool or glass wool; or polystyrene, polyurethane.

5. A building block (100) according to any of the clauses 1 - 4, wherein one or more of the channels (12) extend(s) from the one distinct surface (8) of the building block to the other distinct surface (8) of the building block, partly or completely within the interior of the building block.

6. A building block (100) according to any of the clauses 1 - 5, wherein one or more of the channels (12) extend from the one distinct surface (8) of the building block to the other distinct surface (8) of the building block partly or completely along a part of a distinct surface of the building block.

7. A building block (100) according to any of the clauses 1 - 6, wherein one or more of the channels

(12) independently extend(s) through at least a part of the first block (2) and/or at least through at least a part of the second block (4) and/or at least through a part of the insulation block (6).

8. A building block (100) according to any of the clauses 1-7, wherein the first block (2) and/or the second block (4) and/or the insulation block (6), once the presence of the channels is disregarded, form(s) a right angled parallelepipedum.

9. A building block (100) according to any of the clauses 1 - 7, wherein the building block is having such a shape that a cross-section of the building block in the XY-plane, at least a given specific height level, and preferably at any height level of the building block, defines a rectangle, or defines a trapeze-form, wherein two angles of this trapeze-form are right-angled, and wherein other two angles of this trapeze-form are not right-angled.

10. A building block (100) according to any of the clauses 1 - 9, wherein the extension H_1 in the height direction Z of the first block (2), the extension H_2 in the height direction Z of the second block (4) and the extension H_3 in the height direction Z of the insulation block (6) essentially are the same.

11. A building block (100) according to any of the clauses 1 - 9, wherein the extension H_1 in the height direction Z of the first block (2), the extension H_3 in the height direction Z of the insulation block (6) essentially are the same; and wherein the extension H_2 in the height direction Z of the second block (4) is smaller than the extension H_1 in the height direction Z of the first block (2).

12. A building block (100) according to any of the clauses 1 - 11, wherein the extension L_1 in the longitudinal direction X of the first block (2), the extension L_2 in the longitudinal direction X of the second block (4) and the extension L_3 in the longitudinal direction X of the insulation block (6) essentially are the same.

13. A building block (100) according to any of the clauses 1 - 11, wherein the extension L_1 in the longitudinal direction X of the first block (2), and the extension L_2 in the longitudinal direction X of the second block (4) essentially are the same; and wherein the extension L_3 in the longitudinal direction X of the insulation block (6) is larger than the extensions L_1 , L_2 in the longitudinal direction X of the first block (2) and the second block (4), respectively.

14. A building block (100) according to any of the clauses 1 - 13, wherein the first block (2) is having an extension D_1 in the depth direction Y, and wherein

the second block (4) is having an extension D_2 in the depth direction Y; and wherein the insulation block (6) is having an extension D_3 in the depth direction Y; and wherein $D_1 = D_2 = D_3$; or wherein $D_1 < D_2 = D_3$; or wherein $D_1 = D_2 < D_3$; or wherein $D_1 < D_2 < D_3$. 5

15. A building block (100) according to any of the clauses 1 - 14, wherein the insulation block (6) is being fastened to the first block (2) and/or to the second block (4) with adhesive or glue; and/or wherein the insulation block (6) is being mechanically fastened to the first block (2) and/or to the second block (4), such as with bolts or screws. 10

16. A building block (100) according to any of the clauses 1 - 15, wherein the first block (2), the second block (4) and the insulation block (6) each comprises a planar bottom surface which collectively defines a common plane. 15

17. A building block (100) according to any of the clauses 1 - 16, wherein the first block (2) forms a right angled parallelepipedum, and wherein the second block (4) and the insulation block (6) are L-shaped. 20

18. A building block (100) according to any of the clauses 1 - 16, wherein the first block (2) and the insulation block (6) are L-shaped, and wherein the second block (4) forms a right angled parallelepipedum. 25

19. A building block (100) according to any of the clauses 1 - 18, wherein the building block comprises a channel (12) which extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block. 30

20. A building block (100) according to any of the clauses 1 - 18, wherein the building block comprises a channel (12) comprising two channel sections (12a, 12b), wherein the first channel section (12a) extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block; and wherein second channel section (12b) extends in the depth direction Y from an outer, distinct surface (8) of the second block (4) to the first channel section (12a) in such a way that the first channel section (12a) is connected to the second channel section (12b). 35

21. A building block (100) according to any of the clauses 1 - 18, wherein the building block comprises a channel comprising two channel sections (12a, 12b), wherein the first channel section (12a) extends in the height direction Z from an outer, upper distinct surface (8) of the building block and a portion into the interior of the building block; and wherein second 40

channel section (12b) extends in the depth direction Y from an outer, distinct surface (8) of the second block (4) to the first channel section (12a) in such a way that the first channel section (12a) is connected to the second channel section (12b). 45

22. A building block (100) according to any of the clauses 1 - 18, wherein the building block comprises a channel (12) comprising two channel sections (12a, 12b), wherein the first channel section (12a) extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block; and wherein the second channel section (12b) extends in the height direction Z from an outer, upper distinct surface (8) of the building block and a portion into the interior of the building block in such a way that the first channel section (12a) is connected to the second channel section (12b). 50

23. A building block (100) according to any of the clauses 1 - 18, wherein the building block comprises a channel (12) comprising three channel sections (12a, 12b, 12c), wherein the first channel section (12a) extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block; and wherein the second channel section (12b) extends in the height direction Z from an outer, upper distinct surface (8) of the building block and a portion into the interior of the building block in such a way that the second channel section (12b) is connected to the first channel section (12a); wherein third channel section (12c) extends in the depth direction Y from an outer, distinct surface (8) of the second block to the first channel section (12a) in such a way that the third channel section (12c) is connected to the first channel section (12a). 55

24. A building block (100) according to clause 23, wherein the first channel section (12a) is connected to the second channel section (12b) and the third channel section (12c). 60

25. A building block (100) according to any of the clauses 1 - 18, wherein the building block comprises a channel (12) which extends in the depth direction Y between two opposite surfaces (8). 65

26. A building block (100) according to any of the clauses 1 - 25, wherein one or more of the channel sections of the channel (12) in the building block which extend(s) along the XZ-plane, solely extends in the first block (2), in the second block (4) or in the insulation block (6); or wherein this or these channel sections extend in two or more of these blocks (2, 4, 6). 70

27. A building block (100) according to any of the clauses 1 - 26, wherein the building block is a four- 75

ation block for a structure, such as a building block for a plinth for a structure.

28. A building system (200) comprising a plurality of building blocks, wherein one or more building blocks each is being a building block (100) according to any of the clauses 1 - 27. 5

29. A building system (200) according to clause 28, wherein the building system comprises one or more ordinary building blocks (300), wherein each ordinary building block is being defined as a building block (100) according to any of the clauses 1 - 27, yet without the presence of any channel (12). 10

30. A building system (200) according to clause 28 or 29, wherein the building system comprises a building block (100) according to any of the clauses 21 - 24, and wherein the building system additionally comprises a tube (18), wherein the outer dimension of the tube is being adapted to an opening (20) of a channel or a channel section at an outer, upper distinct surface (8) of the building block. 15

31. A building system (200) according to clause 30, wherein the tube (18) is having a length (h) of 75 - 650 cm, such as 100 - 600 cm, for example 150 - 550 cm, such as 200 - 500 cm, e.g. 250 - 450 cm or 300 - 400 cm. 20

32. A method for the manufacture of a building block (100) according to any of the clauses 1 - 27 comprising the steps of: 25

a) providing a first block (2), a second block (4) and an insulation block (6) in the desired dimensions in such a way that the building block upon assembly will define the channel or the channels (12); 30

b) assembling the first block (2), the second block (4) and the insulation block (6) in such a way that the insulation block (6) is being arranged between the first block (2) and the second block (4); wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws; 35

c) awaiting the glue or adhesive to cure, in case glue or adhesive is being employed. 40

33. A method for the manufacture of a building block (100) according to any of the clauses 1 - 27 comprising the steps of: 45

a) providing a first block (2), a second block (4) and an insulation block (6) in the desired dimen-

sions;

b) assembling the first block (2), the second block (4) and the insulation block (6) in such a way that the insulation block (6) is being arranged between the first block (2) and the second block (4); wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws;

c) awaiting the glue or adhesive to cure, in case glue or adhesive is being employed;

d) forming the channel or the channels (12) in the building block, e.g. by drilling and/or milling material.

34. Use of a building block (100) according to any of the clauses 1 - 27, or of a building system (200) according to any of the clauses 28 - 31 as building block(s) in a structure. 20

35. Use according to clause 34 with the view to reduce the level of influx of radon into the interior of the building from an area below the floor of the building. 25

List of reference numerals

[0140]

2	First block of building block
4	Second block of building block
6	Insulation block of building block
8,8a,8b,8c	Distinct surface of building block
8d,8e,8f	Distinct surface of building block
10	Edge between distinct surfaces of building block
10a	Inner edge of distinct surfaces of building block
10b	Outer edge of distinct surfaces of building block
12,12'	Channel in building block
12a,12b,12c	Channel section in building block
14	Interface between insulation block and first block
16	Interface between insulation block and second block
18	Tube
20	Opening into channel at a distinct surface of building block
100	Building block
200	Building system
300	Ordinary building block according to the prior art
302	First block of building block according to the prior art

304	Second block of building block according to the prior art	
306	Insulation block of building block according to the prior art	
308	Floor in wall/floor structure according to the prior art	5
310	Wall in wall/floor structure according to the prior art	
312	Lose gravel of expanded clay in floor structure according to the prior art	10
314	Wall	
316	Soil	
318	Interior of building	

Claims

1. A building block (100), wherein the building block in the orientation intended during use comprises:

- a first block (2);
- a second block (4);
- an insulation block (6);

wherein the insulation block (6) is being arranged between the first block (2) and the second block (4); wherein the building block is having an extension in a longitudinal direction X; in a depth direction Y and in a height direction Z;

wherein the building block accordingly comprises a number of distinct surfaces (8,8a,8b,8c,8d,8e,8f), which in pairs are being mutually separated by an edge (10,10a,10b);

characterized in that the building block comprises one or more channels (12), wherein one or more of these one or more channels define(s) a passage from one distinct surface (8) to another distinct surface (8).

2. A building block (100) according to claim 1, wherein one or more of the channels (12) independently extend(s) through at least a part of the first block (2) and/or at least through a part of the second block (4) and/or at least through a part of the insulation block (6).
3. A building block (100) according to any of the claims 1 or 2, wherein the extension H_1 in the height direction Z of the first block (2), the extension H_3 in the height direction Z of the insulation block (6) essentially are the same; and wherein the extension H_2 in the height direction Z of the second block (4) is smaller than the extension H_1 in the height direction Z of the first block (2).
4. A building block (100) according to any of the claims 1 - 3, wherein the extension L_1 in the longitudinal direction X of the first block (2), and the extension

L_2 in the longitudinal direction X of the second block (4) essentially are the same; and wherein the extension L_3 in the longitudinal direction X of the insulation block (6) is larger than the extensions L_1 , L_2 in the longitudinal direction X of the first block (2) and the second block (4), respectively.

5. A building block (100) according to any of the claims 1 - 4, wherein the first block (2) is having an extension D_1 in the depth direction Y, and wherein the second block (4) is having an extension D_2 in the depth direction Y; and wherein the insulation block (6) is having an extension D_3 in the depth direction Y; and wherein $D_1 = D_2 = D_3$; or wherein $D_1 < D_2 = D_3$; or wherein $D_1 = D_2 < D_3$; or wherein $D_1 < D_2 < D_3$.

6. A building block (100) according to any of the claims 1 - 5, wherein the insulation block (6) is being fastened to the first block (2) and/or to the second block (4) with adhesive or glue; and/or wherein the insulation block (6) is being mechanically fastened to the first block (2) and/or to the second block (4), such as with bolts or screws.

7. A building block (100) according to any of the claims 1 - 6, wherein the building block comprises a channel (12) which extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block.

8. A building block (100) according to any of the claims 1-7, wherein the building block comprises a channel (12) comprising two channel sections (12a,12b), wherein the first channel section (12a) extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block; and wherein second channel section (12b) extends in the depth direction Y from an outer, distinct surface (8) of the second block (4) to the first channel section (12a) in such a way that the first channel section (12a) is connected to the second channel section (12b).

9. A building block (100) according to any of the claims 1 - 8, wherein the building block comprises a channel comprising two channel sections (12a, 12b), wherein the first channel section (12a) extends in the height direction Z from an outer, upper distinct surface (8) of the building block and a portion into the interior of the building block; and wherein second channel section (12b) extends in the depth direction Y from an outer, distinct surface (8) of the second block (4) to the first channel section (12a) in such a way that the first channel section (12a) is connected to the second channel section (12b).

10. A building block (100) according to any of the claims 1 - 9, wherein the building block comprises a channel

- (12) comprising two channel sections (12a,12b), wherein the first channel section (12a) extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block; and wherein the second channel section (12b) extends in the height direction Z from an outer, upper distinct surface (8) of the building block and a portion into the interior of the building block in such a way that the first channel section (12a) is connected to the second channel section (12b).
11. A building block (100) according to any of the claims 1 - 10, wherein the building block comprises a channel comprising three channel sections (12a,12b,12c), wherein the first channel section (12a) extends in the longitudinal direction X between two opposite, distinct end-surfaces (8) of the building block; and wherein the second channel section (12b) extends in the height direction Z from an outer, upper distinct surface (8) of the building block and a portion into the interior of the building block in such a way that the second channel section (12b) is connected to the first channel section (12a); wherein the third channel section (12c) extends in the depth direction Y from an outer, distinct surface (8) of the second block to the first channel section (12a) in such a way that the third channel section (12c) is connected to the first channel section (12a).
12. A building system (200) comprising a plurality of building blocks, wherein one or more building blocks each is being a building block (100) according to any of the claims 1 - 11.
13. A method for the manufacture of a building block (100) according to any of the claims 1 - 11 comprising the steps of:
- a) providing a first block (2), a second block (4) and an insulation block (6) in the desired dimensions in such a way that the building block upon assembly will define the channel or the channels (12);
 - b) assembling the first block (2), the second block (4) and the insulation block (6) in such a way that the insulation block (6) is being arranged between the first block (2) and the second block (4); wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws;
 - c) awaiting the glue or adhesive to cure, in case glue or adhesive is being employed.
14. A method for the manufacture of a building block (100) according to any of the claims 1 - 11 comprising the steps of:
- a) providing a first block (2), a second block (4) and an insulation block (6) in the desired dimensions;
 - b) assembling the first block (2), the second block (4) and the insulation block (6) in such a way that the insulation block (6) is being arranged between the first block (2) and the second block (4); wherein the assembly is being performed using glue or adhesive, or via mechanical fastening means, such as in the form of bolts or screws;
 - c) awaiting the glue or adhesive to cure, in case glue or adhesive is being employed;
 - d) forming the channel or the channels (12) in the building block, e.g. by drilling and/or by milling material.
15. Use of a building block (100) according to any of the claims 1 - 11, or of a building system (200) according to claim 12 as building block(s) in a structure.

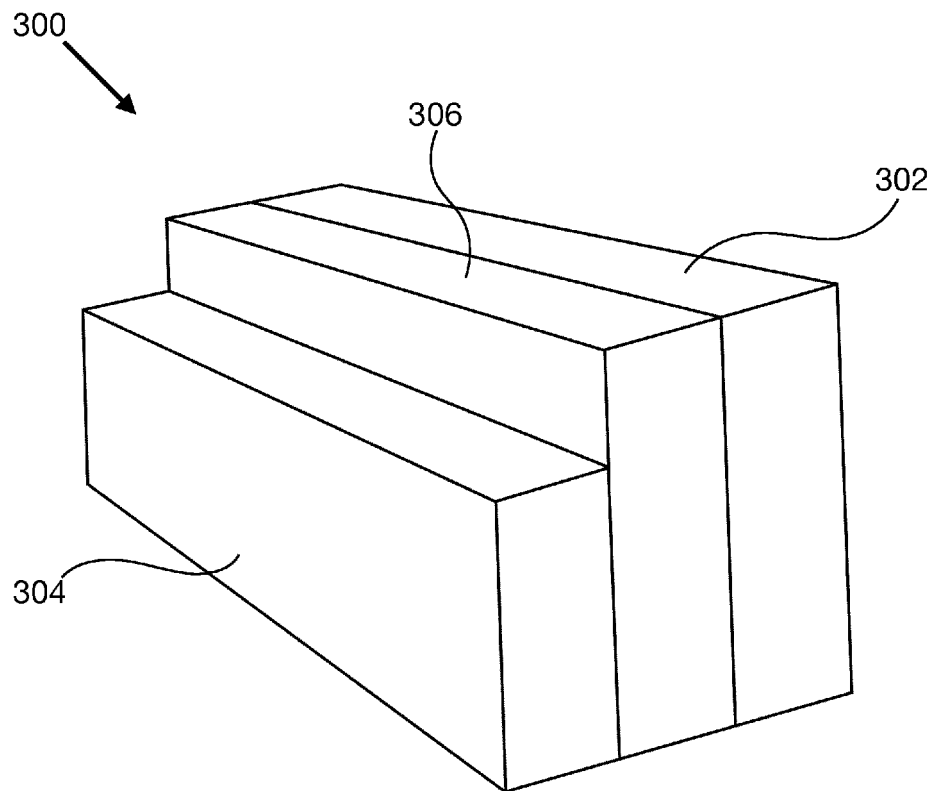


Fig. 1a

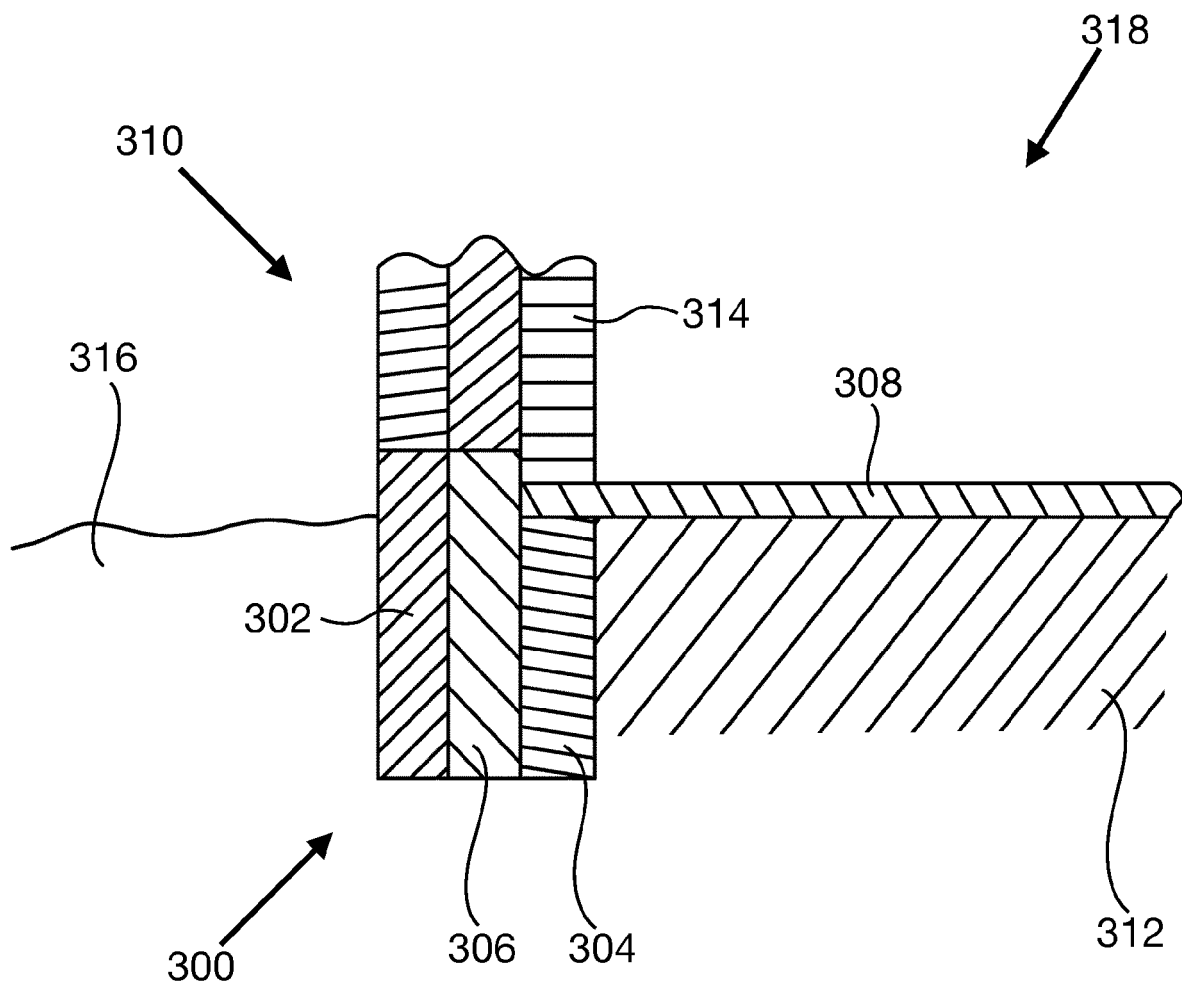


Fig. 1b

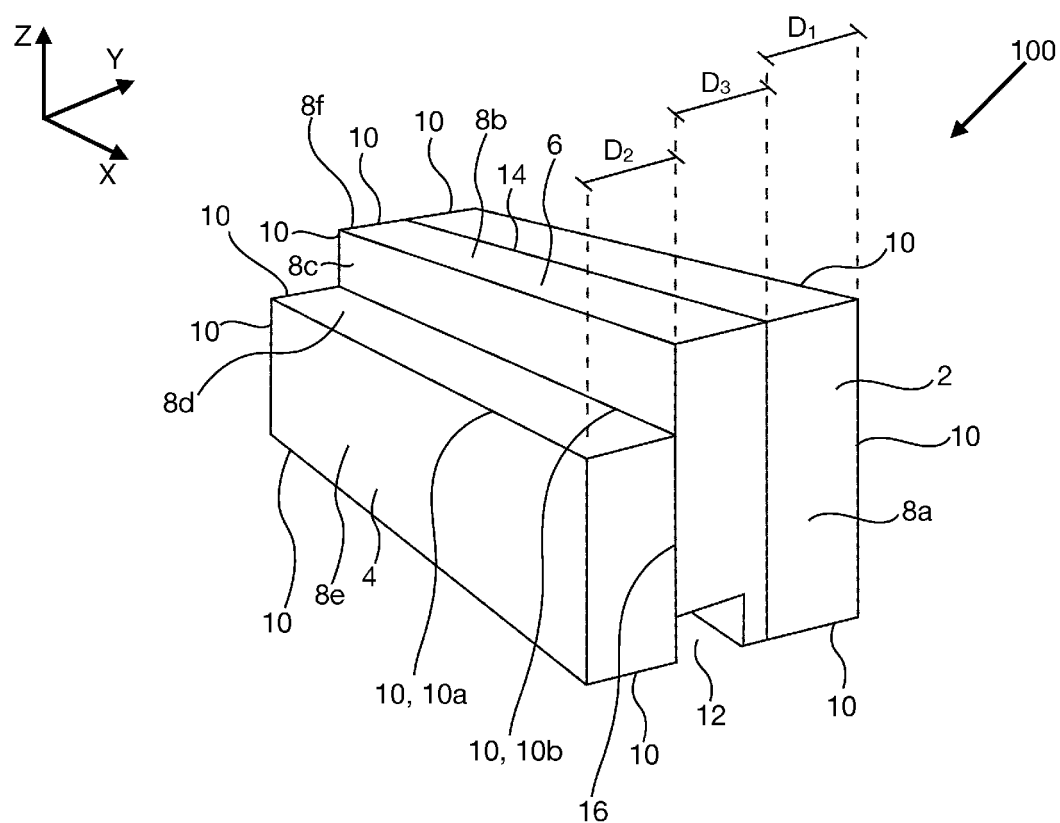


Fig. 2a

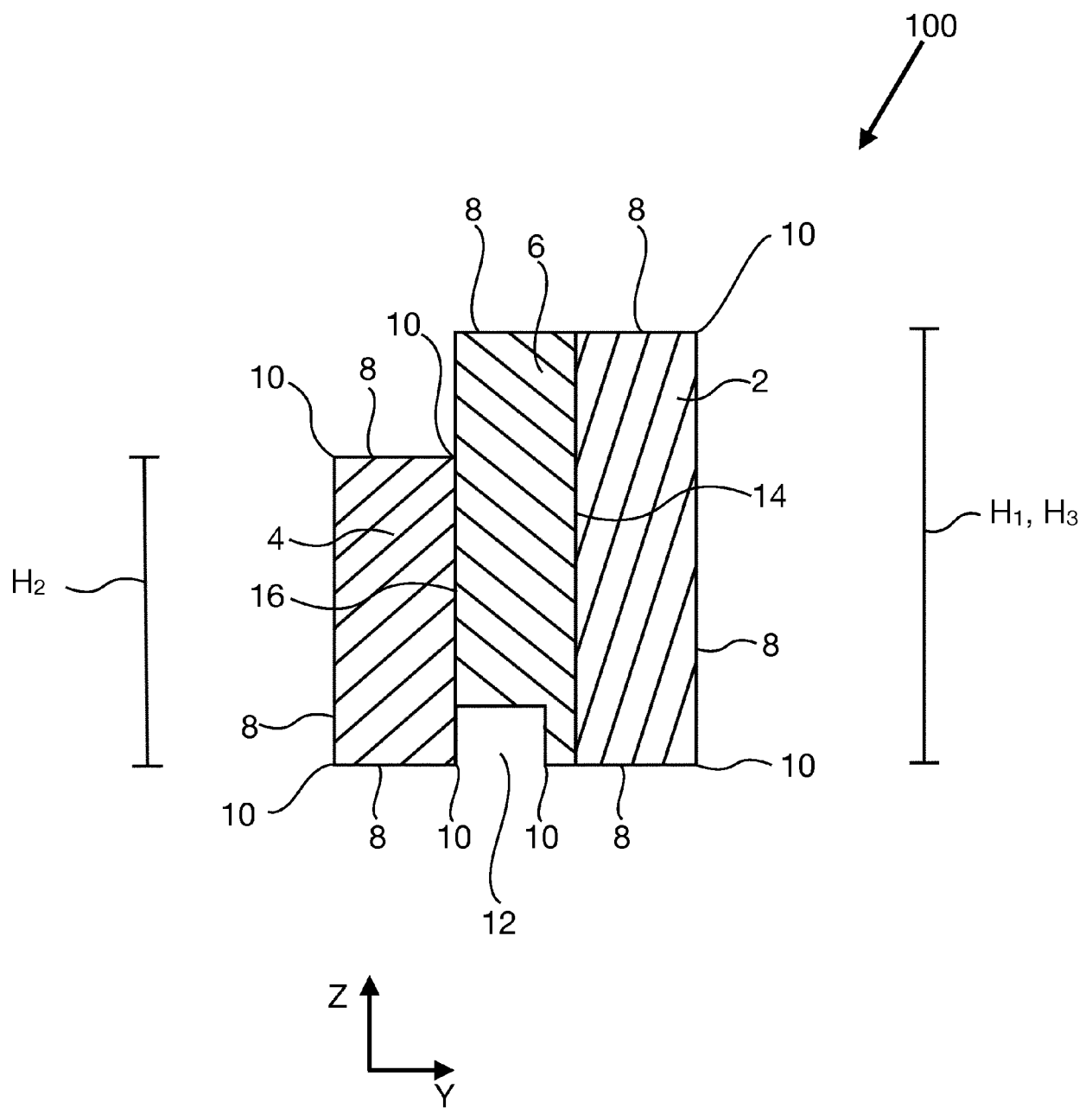


Fig. 2b

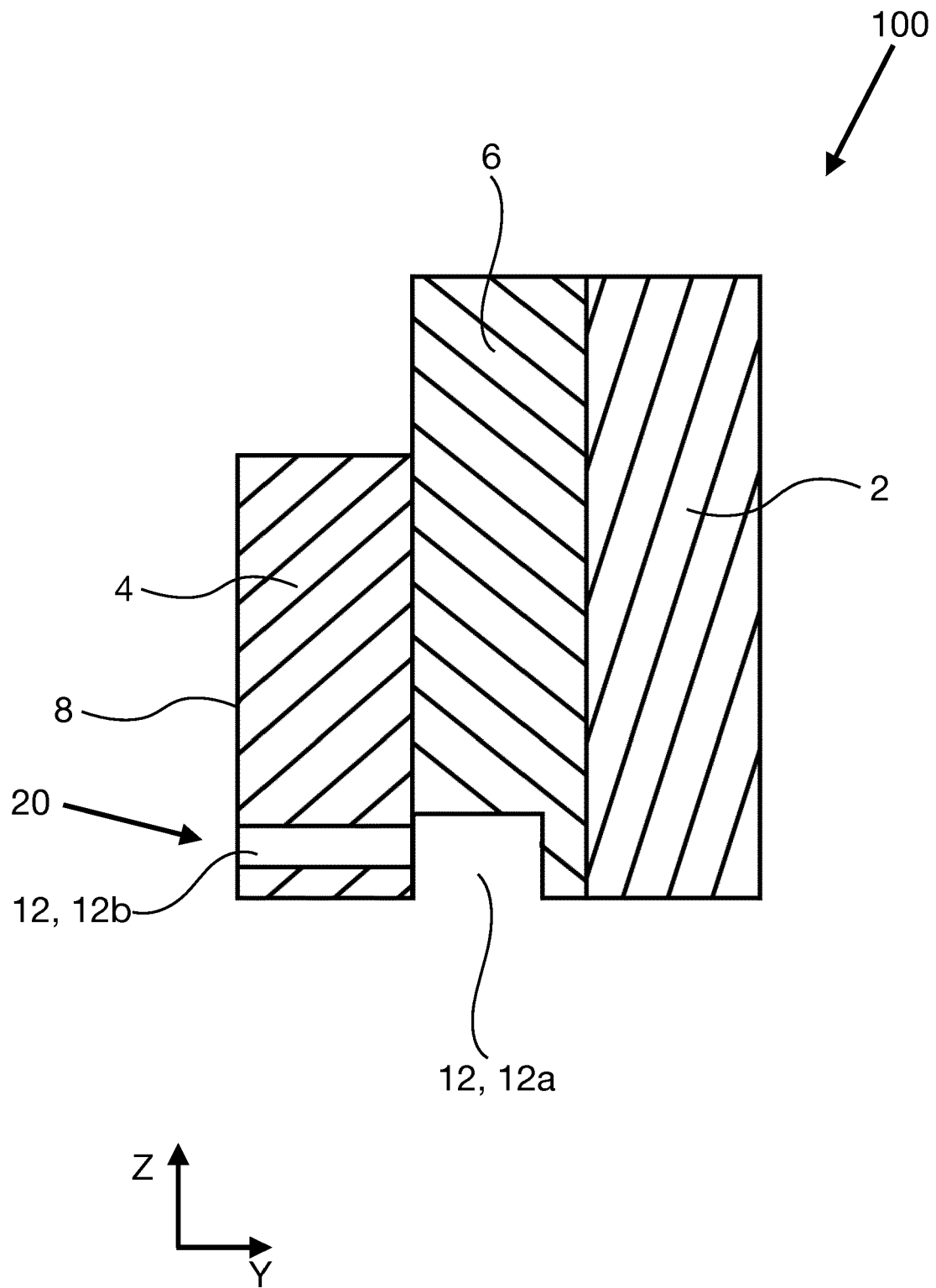


Fig. 3

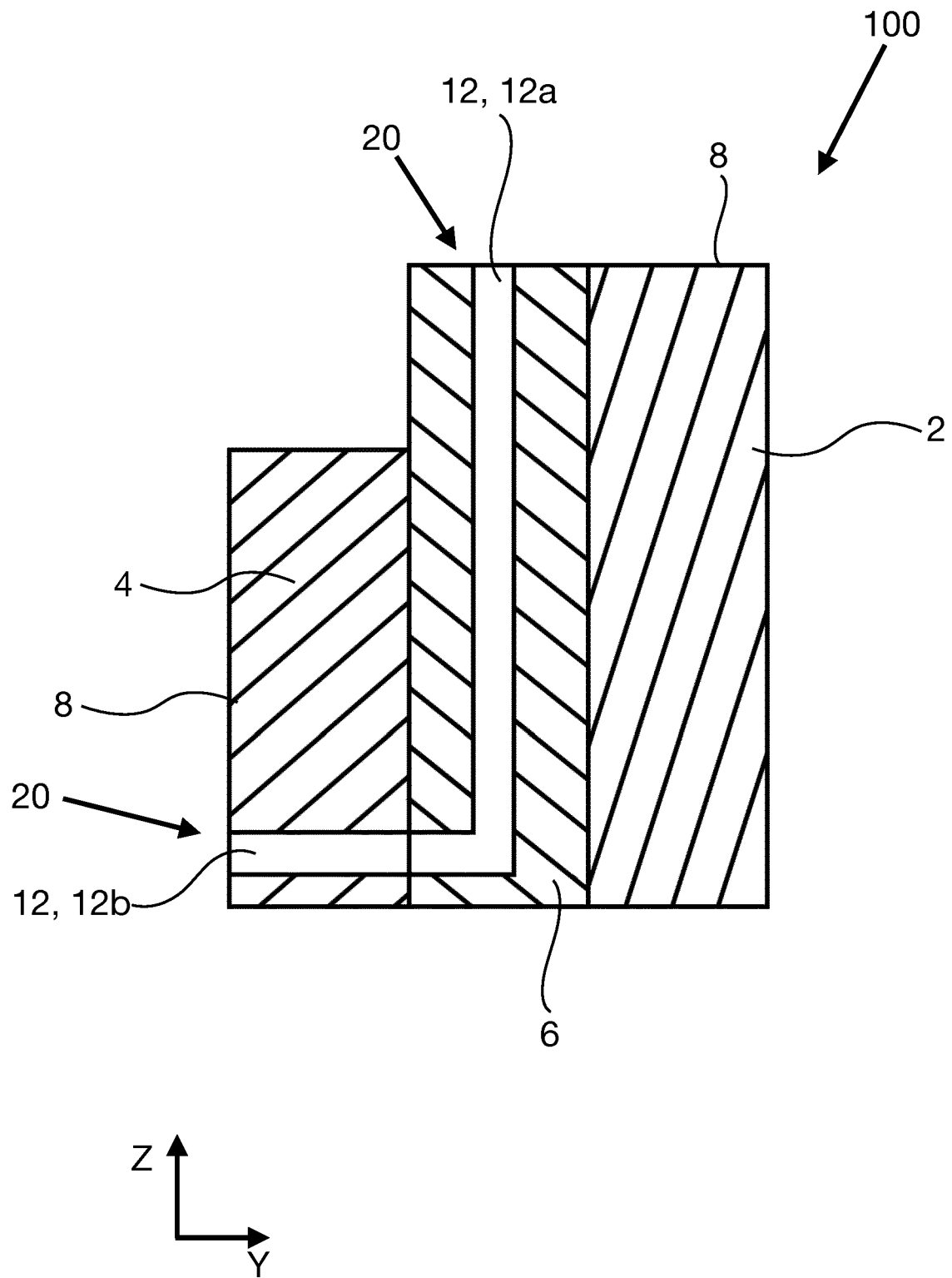


Fig. 4

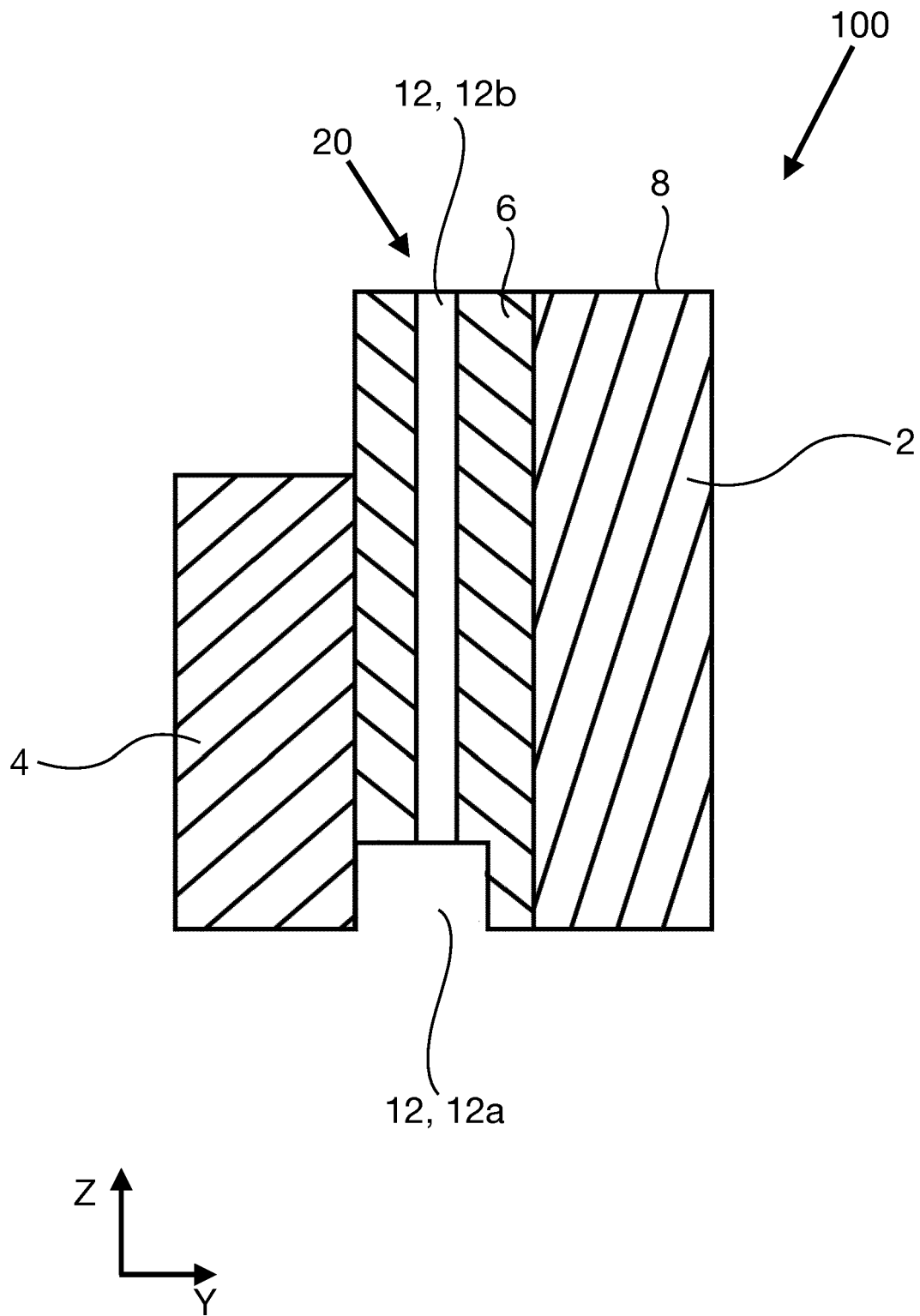


Fig. 5

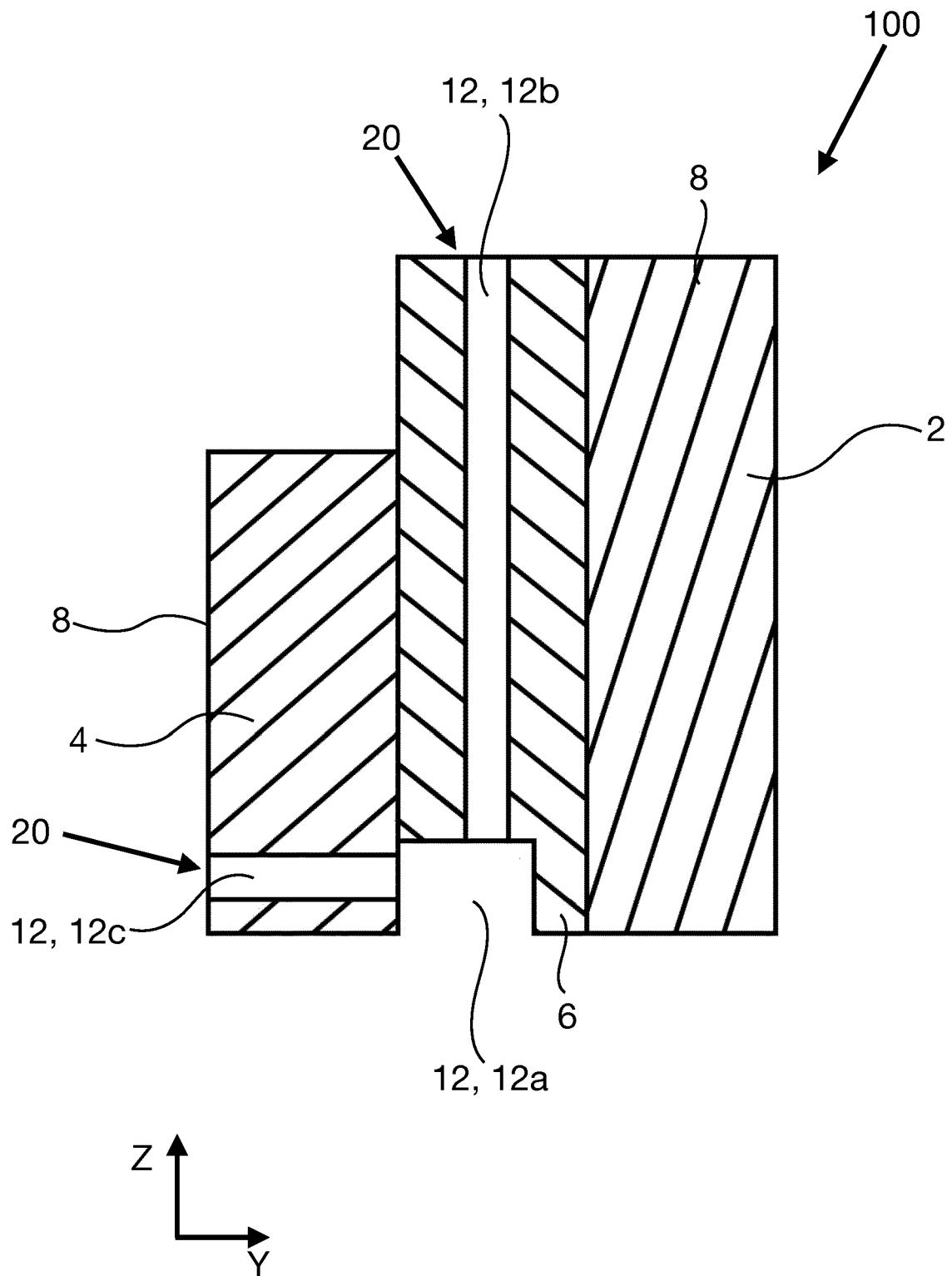


Fig. 6

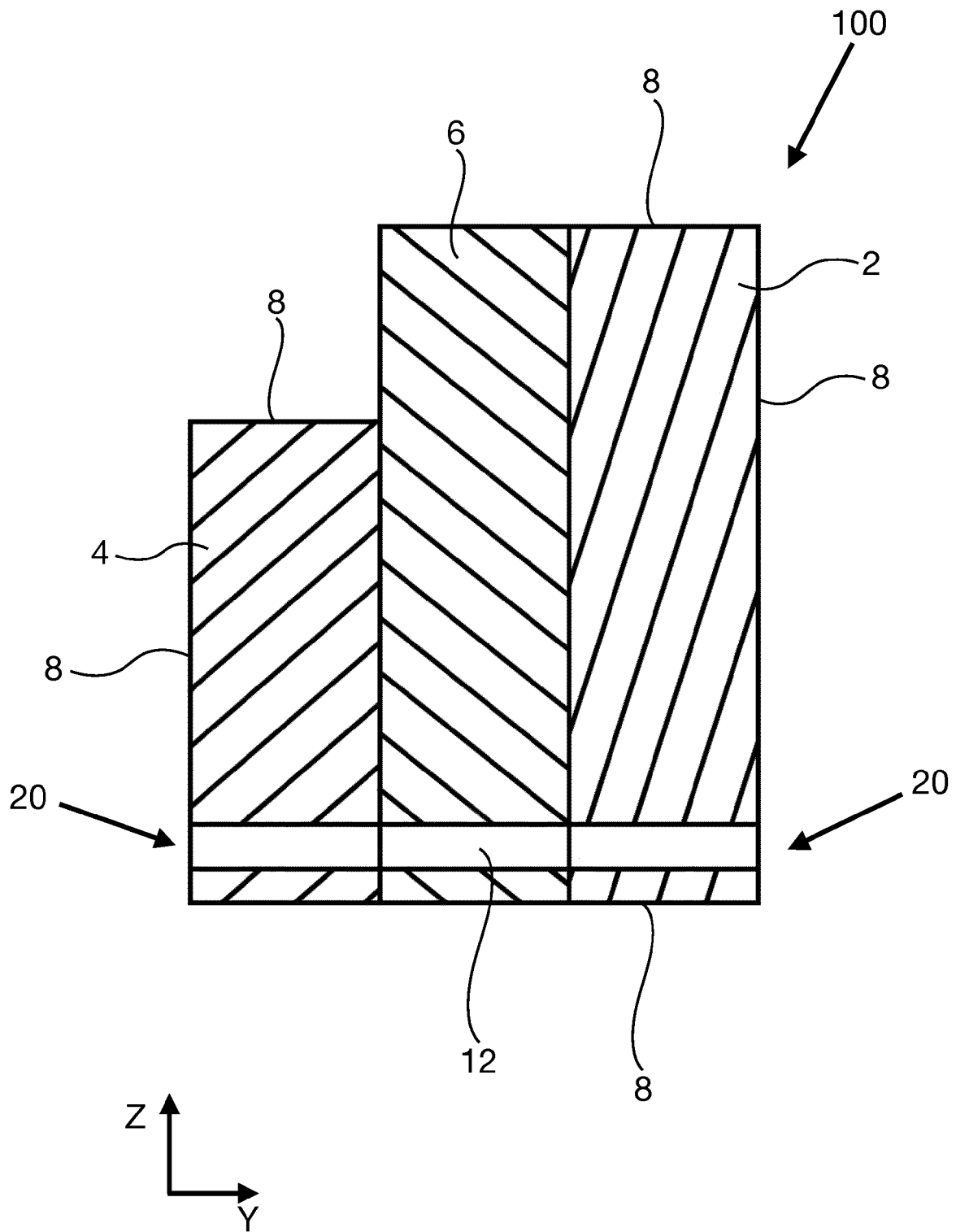


Fig. 7a

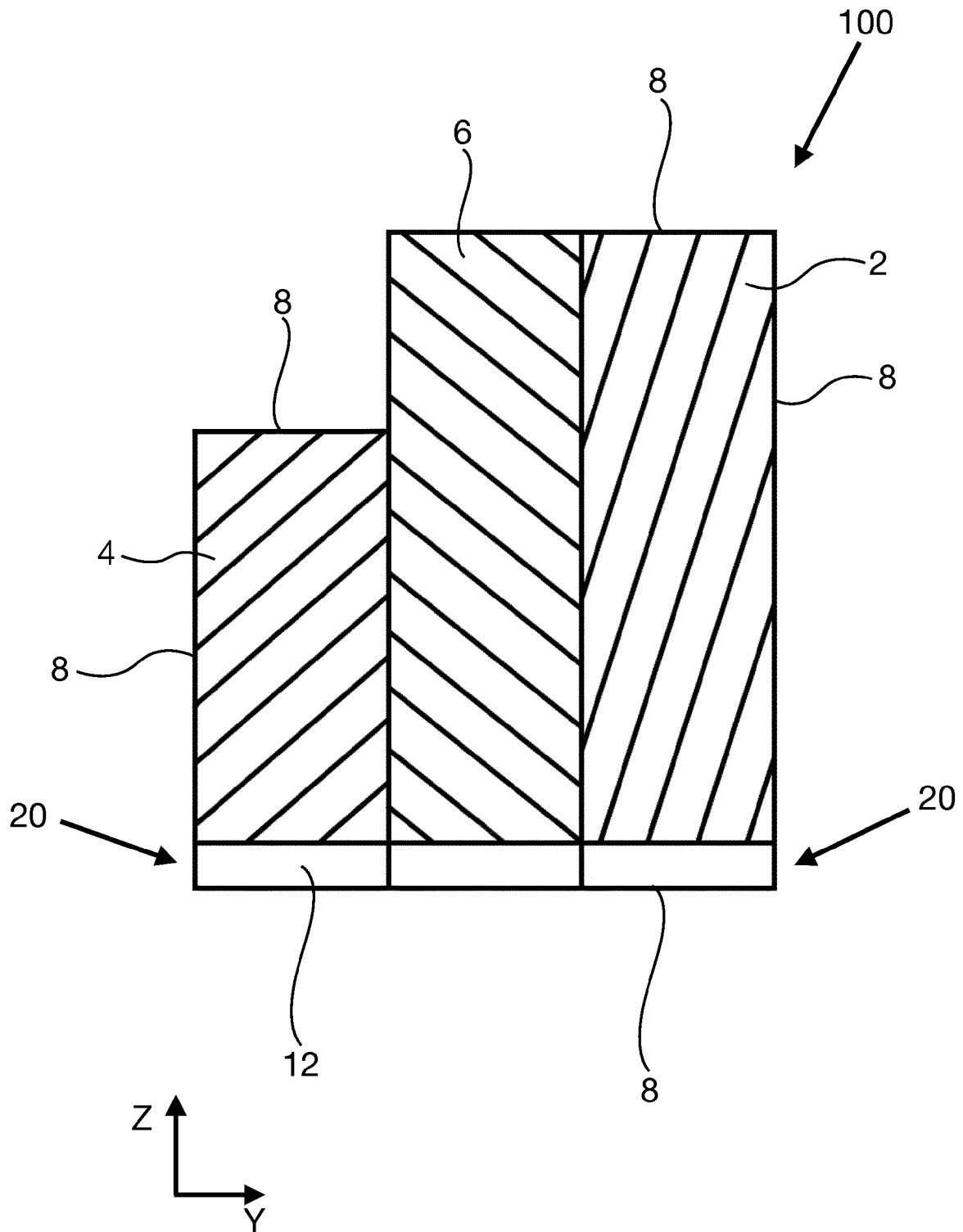


Fig. 7b

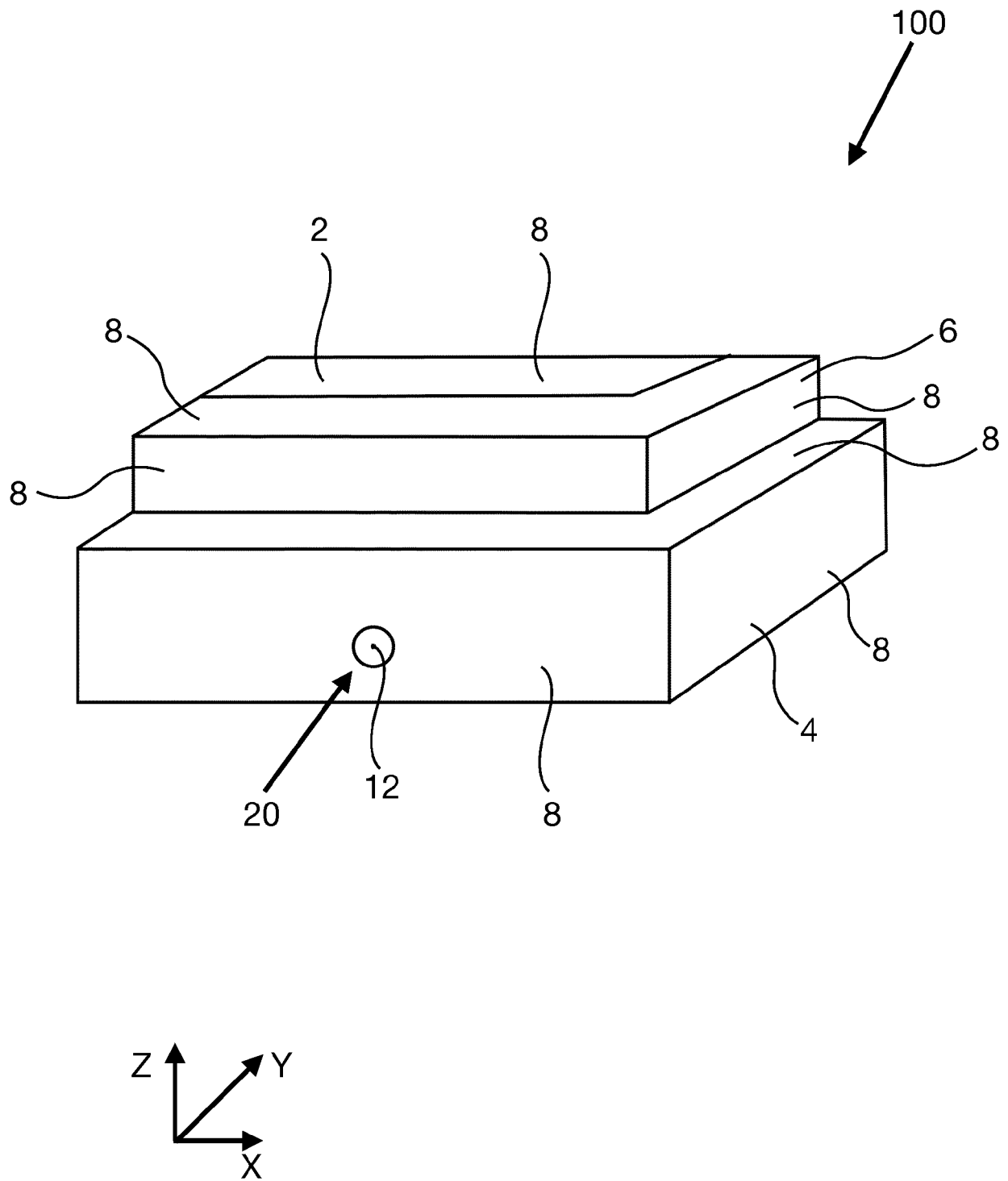


Fig. 8a

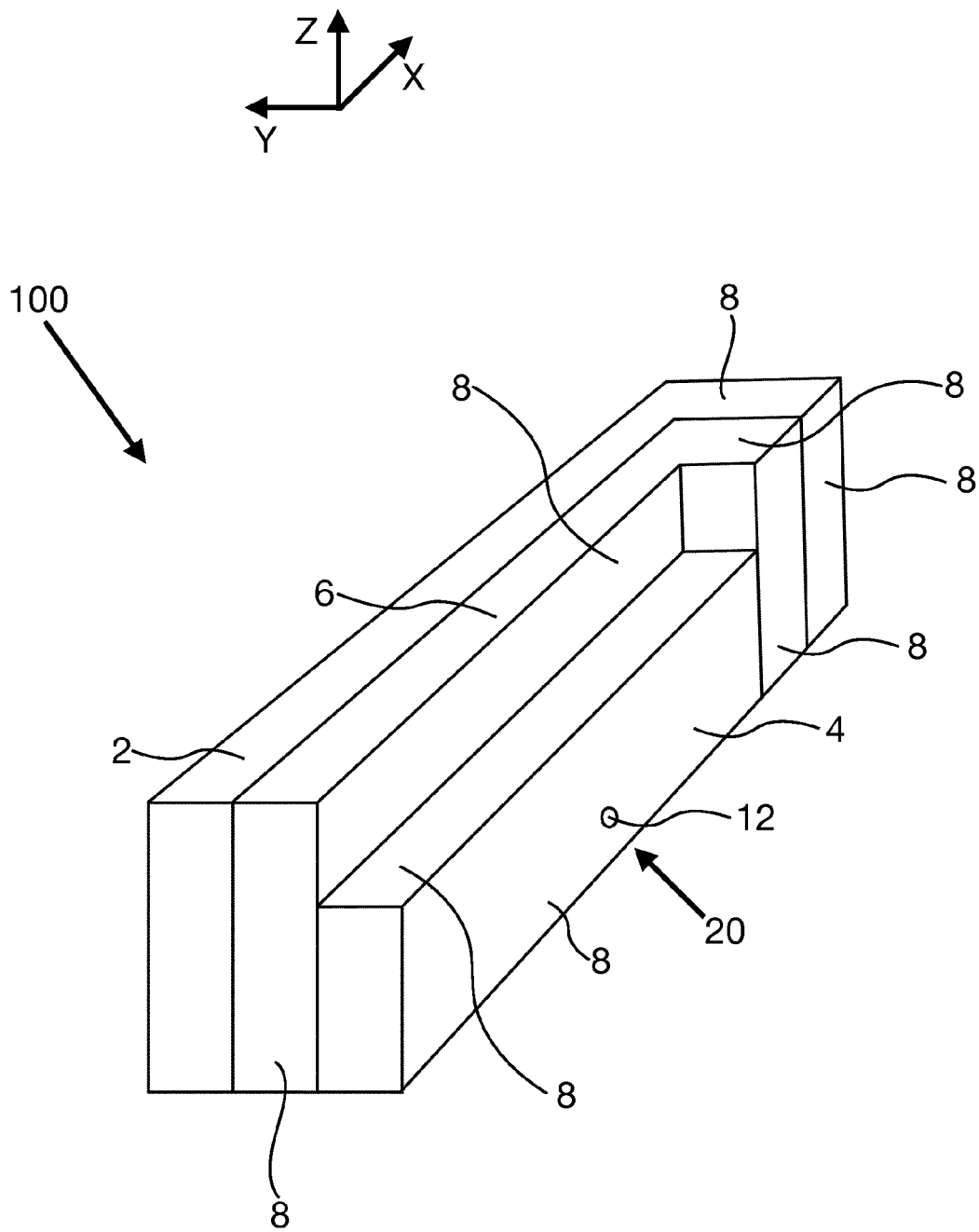


Fig. 8b

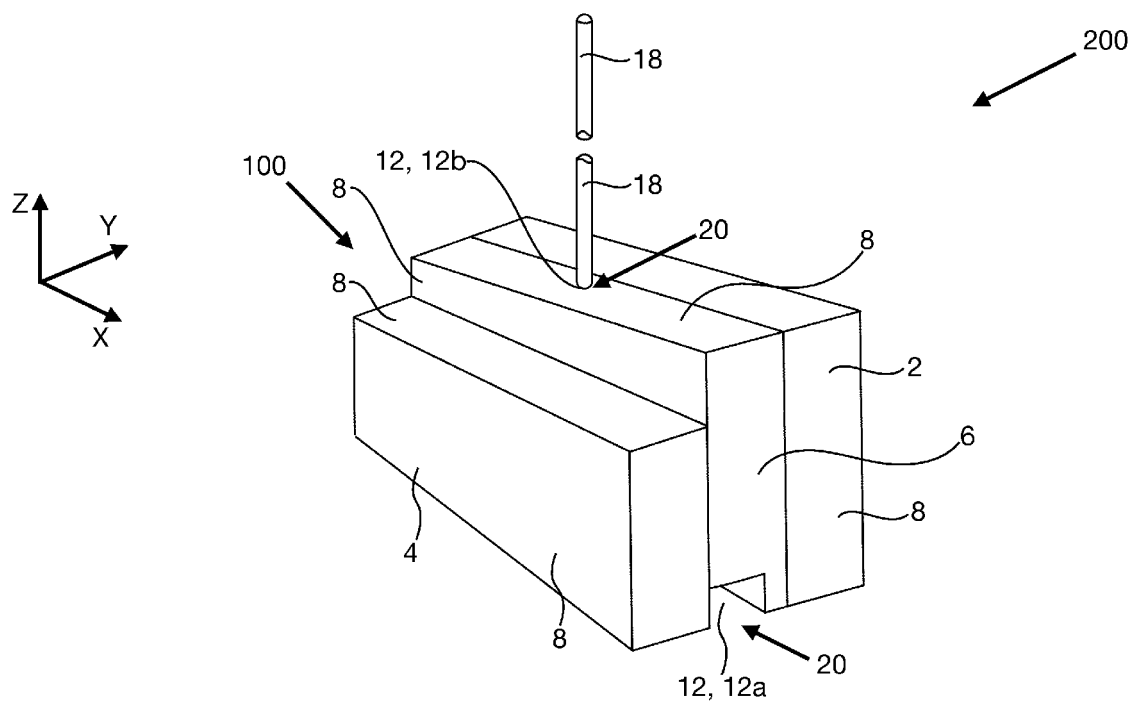


Fig. 9



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