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(54) **Wall block element**

Wandblockelement

Élément de bloc pour mur

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a wall block element. The wall block elements may be e.g. used for building a basement wall and/or for landscaping purposes, such as for building a retaining wall, a masonry wall and/or a curb.

BACKGROUND OF THE INVENTION

[0002] In prior art there are known several types of wall block elements for landscaping purposes, such as for building retaining walls, masonry walls and/or curbs. The wall block elements may be made of concrete, lightweight aggregate or a natural stone. In many landscaping applications the look of natural stone block elements is most pleasing. The problem associated with wall block elements, which conventionally are massive natural stone blocks, is that they are heavy and very difficult or impossible to be handled by manpower. Therefore, a special lifting apparatus is needed for the transfer and installation of such elements.

[0003] A wall block element according to the preamble of claim 1 is known from document GB 2402141A.

OBJECTIVE OF THE INVENTION

[0004] The objective of the invention is to alleviate the disadvantages mentioned above.

[0005] In particular, it is an objective of the present invention to provide wall block elements which, at least when installed to form a retaining wall, a masonry wall or a curb, has a look of genuine natural stone, and which wall block elements are also lightweight and can be lifted and handled by manpower without a need for a lifting apparatus.

SUMMARY OF THE INVENTION

[0006] According to the present invention a wall block element is provided. The wall block element comprises a first panel and a second panel, at least said first panel being a natural stone slab, one or more spacer elements, made of metal for placing and adjoining the first panel and the second panel together in parallel and at a distance in relation to each other, and an inner space being defined by the panels in-between the panels, in which inner space a filling material, such as cast concrete, can be placed, said spacer elements each having connecting means to attach at least the first panel to the spacer elements. According to the invention the second panel is made of a sheet metal and is an integral structure with the spacer elements, said wall block element being for the retaining wall in which the second panel is against the soil and the first panel having an outer surface as a façade of the wall block element. The second panel and

the spacer elements are formed of a single sheet metal blank, the two spacer elements being bent from the ends of the second panel perpendicularly in relation to the plane of the second panel. The second panel comprises an upper edge and a lower edge, said upper edge having an edge bend which is directed perpendicularly towards the first panel, and said lower edge having a receptacle which opens to an opposite direction in relation to the direction of the edge bend, the receptacle being adapted to receive inside the edge bend of another wall block element.

[0007] The advantage of the invention is that the wall block element is lightweight and easy to lift, handle and install by manpower. No lifting apparatus will be necessarily needed. For example, while a massive granite (density about 2750 kg/m³) wall block element having dimensions in conformity with the aggregate concrete masonry unit standards, e.g. with a length 600 mm, height 200 mm and width 200 mm, weighs about 66 kg, the wall block element with a structure according to the invention and e.g. having two natural stone slabs, with a length 600 mm, height 200 mm and thickness 20 mm, weighs only about 15 kg.

[0008] In an embodiment of the invention, the connecting means comprise a connecting flange which is parallel to the surface of the panel to which the connecting flange is attached.

[0009] In an embodiment of the invention, the connecting means comprise a glue joint by which the connecting flange is attached to the panel. The glue joint is advantageous because it does not require any holes, borings or other machining to be made in the natural stone slab. The surface of the natural stone slab achieved by sawing is suitable for gluing.

[0010] In an embodiment of the invention, the connecting means comprise a plurality of holes arranged at each connecting flange to enhance the grip of the glue joint. The plurality of holes can be arranged as a pattern of perforations.

[0011] In an embodiment of the invention, the wall block element comprises two spacer elements which are at a distance from each other.

[0012] In an embodiment of the invention, the connecting means comprise connecting flanges which are bent perpendicularly from the sheet steel material of the spacer elements to be parallel with the inner surfaces of the panels, said connecting flanges being connected with glue joints to the sawn inner surfaces.

[0013] In an embodiment of the invention, the spacer elements are placed into the inner space, the spacer elements being located at a distance from the end surfaces of the panels.

[0014] In an embodiment of the invention, the spacer element comprises an upper edge having one or more notches which are located at a distance below the upper surface of the panels.

[0015] In an embodiment of the invention, the spacer element comprises one or more holes to provide a path

for the filling material, such as cast concrete.

[0016] In an embodiment of the invention, the spacer element comprises a stiffening flange at the lower edge of the spacer element.

[0017] In an embodiment of the invention, the stiffening flange is bent perpendicularly from the plane of the sheet metal material of the spacer element.

[0018] In an embodiment of the invention, the thickness of the natural stone slab is 1 to 8 cm.

[0019] In an embodiment of the invention, the wall block element has outer dimensions which are in conformity with the aggregate concrete masonry unit standards.

[0020] It is to be understood that the aspects and embodiments of the invention described above may be used in any combination with each other. Several of the aspects and embodiments may be combined together to form a further embodiment of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] The accompanying drawings, which are included to provide a further understanding of the invention and constitute a part of this specification, illustrate embodiments of the invention and together with the description help to explain the principles of the invention. In the drawings:

Figure 1 is a perspective view of a first embodiment of the wall block element according to the invention,

Figure 2 shows the wall block element of Figure 1 the first panel being drawn with a dash line and shown as transparent,

Figure 3 is an axonometric view of a retaining wall built from the wall block elements of Figure 1,

Figure 4 is a schematic cross section of IV-IV of the retaining wall of Figure 3,

Figure 5 is a perspective view of a wall block element not being covered by the appended claims,

Figure 6 shows the wall block element of Figure 5 the first panel and the second panel being drawn with a dash line and shown as transparent,

Figure 7 is a perspective view of a wall block element not being covered by the appended claims,

Figure 8 shows the wall block element of Figure 7 the first panel and the second panel being drawn with a dash line and shown as transparent,

Figure 9 is an axonometric view of a masonry wall built from the wall block elements of Figure 5, and

Figure 10 is an axonometric view of a masonry wall built from the wall block elements of Figure 7.

DETAILED DESCRIPTION OF THE INVENTION

[0022] Figures 1 and 2 show a first embodiment of the wall block element 1. The wall block element is suitable for building a basement wall of a building or a retaining wall 4 (see also Figures 3 and 4). A retaining wall is a structure designed and constructed to resist the lateral pressure of soil when there is a desired change in ground elevation that exceeds the angle of repose of the soil.

[0023] The wall block element 1 comprises a first panel 6 and a second panel 7. In this embodiment the second panel 7 is made of sheet metal (sheet steel or sheet aluminium) and the first panel 6 is a natural stone slab. Two spacer elements 8, 9 which are made of sheet metal are arranged at a distance from each other to placing and adjoin the first panel 6 and the second panel 7 together in parallel and at a distance in relation to each other. An inner space 10 is defined by the panels in-between the panels 6 and 7. A filling material 11, such as cast concrete, can be placed into the inner space 10. As can be seen in Figure 2, each of the spacer elements 8 and 9 have connecting means 12 to attach the first panel 6 to the spacer elements 8 and 9. The connecting means 12 comprise a connecting flange 13 which is parallel to the surface of the first panel 1 to which the connecting flange 13 is attached by a glue joint. In order to enhance the grip of the glue joint a plurality of holes 14 are arranged at the connecting flanges 13.

[0024] The second panel 7 is made of a sheet metal and is an integral structure with the spacer elements 8, 9. As shown in Figure 4, in the retaining wall 5 the second panel 7 is against the soil 15 and the first panel 6 having an outer surface 16 as a façade of the wall block element 1 and forming a façade of the retaining wall.

[0025] Referring again to Figure 2, the second panel 7 and the spacer elements 8, 9 are formed of a single sheet metal blank. The two spacer elements 8, 9 are bent from the ends of the second panel 7 perpendicularly in relation to the plane of the second panel 7.

[0026] With reference to Figure 2 and 4, the second panel 7 comprises an upper edge 17 and a lower edge 18. The upper edge 17 has an edge bend 19 which is directed perpendicularly towards the first panel 6. The lower edge 18 has a receptacle 20 formed as an open hem which opens to an opposite direction in relation to the direction of the edge bend 19, the receptacle 20 being adapted to receive inside the edge bend of another wall block element. The interlocking of the edge bend 19 and the receptacle 20 holds the wall block elements 1 firmly before and during the inner spaces 10 are filled with the filling material 11. Preferably the filling material 11 is cast concrete. The inner spaces 10 of the different wall block elements 1 are all vertically and laterally connected to each other to allow the concrete flow inside the wall during casting. For this purpose, the spacer elements 8, 9

comprise holes 27 to provide a path for the filling material 11. The spacer elements 8, 9 comprise notches 25 formed at the upper edge 24. The notches are located at a distance h below the upper surface of the panel 6. As shown in Figures 3 and 4 reinforcement bars 26 can be placed on the support of the notches 25. In Figures 5, 6 and 9, the wall block element 2 comprises a first panel 6 which is a natural stone slab and a second panel 7 which is also a natural stone slab. Such a wall block element 2 having two natural stone slabs on its opposite sides is suitable for building a masonry wall (see Figure 9) wherein both sides of the wall are exposed and visible. **[0027]** The first panel 6 and the second panel 7 both have a sawn inner surface 21 which is towards the inner space 10 and a treated outer surface 22 on the façade sides of the slabs. The outer surface 22 may be treated by any known process suitable for treating a natural stone surface. These include sawing, splitting, cleaving, polishing, honing, bush hammering, flaming, sand blasting, shot blasting and/or water jetting. Two spacer elements 8, 9 made of sheet metal (such as sheet steel or sheet aluminium) are arranged at a distance from each other for placing and adjoining the first panel 6 and the second panel 7 together in parallel and at a distance in relation to each other. An inner space 10 is defined in-between the first and second natural stone slab panels 6, 7. A filling material (not shown), such as cast concrete, can be placed inside the inner space 10. The spacer elements 8, 9 have connecting means 12 to attach the first and second natural stone slab panels 6, 7 to the spacer elements 8, 9.

[0028] Referring again to Figures 5 and 6, the wall block element 2, 3 comprises two spacer elements 8, 9 which are separate from each other. The first panel 6 and the second panel 7 have vertical end surfaces 23 which are sawn surfaces. The spacer elements 8, 9 are connected with glue joints to these end surfaces 23.

[0029] Each of the spacer elements 8 and 9 are formed of a single sheet metal blank. The spacer elements 8 and 9 are identical. The connecting means 12 comprise a connecting flange 13 at the vertical edge regions of the spacer elements. The spacer elements 8 and 9 are attached by glue joints to the end surfaces 23 of the first panel 6 and the second panel 7. In order to enhance the grip of the glue joint a plurality of holes 14 are arranged at the connecting flanges 13. In Figures 5 and 6, the spacer elements 8, 9 comprise an upper edge 24 having notches 25, which are located at a distance h below the upper surface of the panels. The notches 25 can form a support for the reinforcement bar. The spacer elements 8, 9 comprise holes 27 to provide a path for the filling material 11, such as cast concrete. Further, the spacer elements 8, 9 comprise a stiffening flange 28 at the lower edge 29 of the spacer element. The stiffening flange 28 is bent perpendicularly from the plane of the sheet metal material of the spacer element 8, 9. In Figures 7, 8 and 10, the wall block element 2 comprises a first panel 6 which is a natural stone slab and a second panel 7 which

is also a natural stone slab. Such a wall block element 2 having two natural stone slabs on its opposite sides is suitable for building a masonry wall (see Figure 10) wherein both sides of the wall are exposed and visible.

[0030] The first panel 6 and the second panel 7 both have a sawn inner surface 21 which is towards the inner space 10 and a treated outer surface 22 on the façade sides of the slabs. The outer surface 22 may be treated by any known process suitable for treating a natural stone surface. These include sawing, splitting, cleaving, polishing, honing, bush hammering, flaming, sand blasting, shot blasting and/or water jetting. Two spacer elements 8, 9 made of sheet metal (sheet steel or sheet aluminium) are arranged at a distance from each other for placing and adjoining the first panel 6 and the second panel 7 together in parallel and at a distance in relation to each other. An inner space 10 is defined in-between the first and second natural stone slab panels 6, 7. A filling material (not shown), such as cast concrete, can be placed inside the inner space 10. The spacer elements 8, 9 have connecting means 12 to attach the first and second natural stone slab panels 6, 7 to the spacer elements 8, 9. **[0031]** Referring to Figures 7 and 8, the wall block element 2, 3 comprises two spacer elements 8, 9 which are separate from each other. The spacer elements 8, 9 are placed into the inner space 10. The spacer elements are located at a distance from the vertical end surfaces 23 of the panels 6 and 7. The connecting means 12 comprise connecting flanges 13 which are bent perpendicularly from the sheet metal material of the spacer elements 8, 9 to be parallel with the inner surfaces 21 of the panels 6, 7, said connecting flanges being connected with glue joints to the sawn inner surfaces.

[0032] Each of the spacer elements 8 and 9 are formed of a single sheet metal blank. The spacer elements 8 and 9 are identical. The connecting means 12 comprise a connecting flange 13 at the vertical edge regions of the spacer elements. The spacer elements 8 and 9 are attached by glue joints to the inner surfaces 21 of the first panel 6 and the second panel 7. In order to enhance the grip of the glue joint a plurality of holes 14 are arranged at the connecting flanges 13. In Figures 7 and 8, the spacer elements 8, 9 comprise an upper edge 24 having notches 25, which are located at a distance below the upper surface of the panels. The notches 25 can form a support for the reinforcement bar (not shown). The spacer elements 8, 9 comprise holes 27 to provide a path for the filling material 11, such as cast concrete. Further, the spacer element 8, 9 comprises a stiffening flange 28 at the lower edge 29 of the spacer element. The stiffening flange 28 is bent perpendicularly from the plane of the sheet metal material of the spacer element 8, 9. In Figures 1 to 10 the thickness of the natural stone slab may be 1 to 8 cm depending on the application. A natural stone slab having a treated outer surface 22 may have a thickness which is 1 cm or more. A natural stone slab having a split (cleaved) outer surface 22 may have a thickness of 5 to 8 cm. Preferably, the wall block elements

1, 2, 3 have outer dimensions which are in conformity with the aggregate concrete masonry unit standards. Such a wall block element 1, 2 3 may have dimensions e.g. length 600 mm, height 200 mm and width 150 mm or 200 mm or 300 mm.

[0033] Although the invention has been described in conjunction with a certain type of wall block element, it should be understood that the invention is not limited to any certain type of wall block element. While the present inventions have been described in connection with a number of exemplary embodiments, and implementations, the present inventions are not so limited, but rather cover various modifications, and equivalent arrangements, which fall within the scope of the appended claims.

Claims

1. A wall block element (1, 2, 3) comprising

- a first panel (6) and a second panel (7), at least said first panel (6) being a natural stone slab, and
 - one or more spacer elements (8, 9) made of metal for placing and adjoining the first panel (6) and the second panel (7) together in parallel and at a distance in relation to each other, and
 - an inner space (10) being defined by the panels in-between the panels, in which inner space a filling material (11), such as cast concrete, can be placed, said spacer elements each having connecting means (12) to attach at least the first panel to the spacer elements, **characterized in that** the second panel (7) is made of a sheet metal and is an integral structure with the spacer elements (8, 9), said wall block element (1) being for the retaining wall (4) in which the second panel (7) is against the soil (15) and the first panel (6) having an outer surface (16) as a façade of the wall block element (1); that the second panel (7) and the spacer elements (8, 9) are formed of a single sheet metal blank, the two spacer elements (8, 9) being bent from the ends of the second panel (7) perpendicularly in relation to the plane of the second panel; and that the second panel (7) comprises an upper edge (17) and a lower edge (18), said upper edge (17) having an edge bend (19) which is directed perpendicularly towards the first panel (6), and said lower edge (18) having a receptacle (20) which opens to an opposite direction in relation to the direction of the edge bend, the receptacle being adapted to receive inside the edge bend of another wall block element.

2. The wall block element according to claim 1, **characterized in that** the connecting means (12) comprise a connecting flange (13) which is parallel to the

surface of the panel (1, 2, 3) to which the connecting flange is attached.

3. The wall block element according to claim 2, **characterized in that** the connecting means (12) comprise a glue joint by which the connecting flange (13) is attached to the panel (1, 2, 3).

4. The wall block element according to claim 3, **characterized in that** connecting means (12) comprise a plurality of holes (14) arranged at each connecting flange (13) to enhance the grip of the glue joint.

5. The wall block element according to claim 4, **characterized in that** the wall block element (2, 3) comprises two spacer elements (8, 9) which are at a distance from each other.

6. The wall block element according to claim 5, **characterized in that** the connecting means (12) comprise connecting flanges (13) which are bent perpendicularly from the sheet metal material of the spacer elements (8, 9) to be parallel with the inner surfaces (21) of the panels (2, 3), said connecting flanges being connected with glue joints to the sawn inner surface of the first panel (6).

7. The wall block element according to claim 6, **characterized in that** the spacer elements (8, 9) are placed into the inner space (10), the spacer elements being located at a distance from the end surfaces (23) of the panels.

8. The wall block element according to any one of the claims 1 to 7, **characterized in that** the spacer element (8, 9) comprises an upper edge (24) having one or more notches (25), which are located at a distance (h) below the upper surface of the panels, whereby a reinforcement bar (26) can be placed on the support of the notches.

9. The wall block element according to any one of the claims 1 to 8, **characterized in that** the spacer element (8, 9) comprises one or more holes (27) to provide a path for the filling material (11), such as cast concrete.

10. The wall block element according to any one of the claims 1 to 9, **characterized in that** the spacer element (8, 9) comprises a stiffening flange (28) at the lower edge (29) of the spacer element.

11. The wall block element according to claim 10 **characterized in that** the stiffening flange (28) is bent perpendicularly from the plane of the sheet metal material of the spacer element (8, 9).

12. The wall block element according to any one of the

claims 1 to 11, **characterized in that** the thickness of the natural stone slab is 1 to 8 cm.

13. The wall block element according to any one of the claims 1 to 12, **characterized in that** the wall block element (1, 2, 3) has outer dimensions which are in conformity with the aggregate concrete masonry unit standards.

Patentansprüche

1. Ein Wandblock-Element (1, 2, 3), umfassend
- eine erste Platte (6) und eine zweite Platte (7), wobei zumindest besagte erste Platte (6) eine Natursteinplatte ist, und
 - ein oder mehr aus Metall hergestellte Abstandselemente (8,9) zum Platzieren und Nebeneinanderlegen der ersten Platte (6) und der zweiten Platte (7) zusammen, parallel und auf Abstand im Verhältnis zueinander, und
 - einen durch die Platten zwischen den Platten definierten inneren Raum (10), in welchem inneren Raum ein Füllmaterial (11) wie zum Beispiel Gussbeton eingebracht werden kann, wobei besagte Abstandselemente jeweils Verbindungsmittel (12) aufweisen, um zumindest die erste Platte an den Abstandselementen zu befestigen, **dadurch gekennzeichnet, dass** die zweite Platte (7) aus einem Metallblech hergestellt ist und eine integrale Struktur mit den Abstandselementen (8,9) ist, wobei besagtes Wandblock-Element (1) für die Stützmauer ist, worin die zweite Platte (7) gegen die Erde ist und die erste Platte (6) eine äußere Oberfläche (16) als eine Fassade von dem Wandblock-Element (1) hat; dass die zweite Platte (7) und die Abstandselemente (8,9) aus einem einzelnen Blechzuschnitt ausgebildet sind, wobei die zwei Abstandselemente (8,9) von den Enden der zweiten Platte (7) senkrecht im Verhältnis zu der Ebene der zweiten Platte gebogen sind; und dass die zweite Platte (7) eine obere Kante (17) und eine untere Kante (18) umfasst, wobei besagte obere Kante (17) eine Kantenbiegung (19) hat, welche senkrecht zur ersten Platte (6) ausgerichtet ist, und besagte untere Kante (18) eine Aufnahme (20) hat, welche sich öffnet zu einer gegenüberliegenden Richtung relativ zu der Richtung der Kantenbiegung, wobei die Aufnahme angepasst ist innenseitig die Kantenbiegung eines anderen Wandblock-Elementes aufzunehmen.
2. Wandblock-Element nach Anspruch 1, **dadurch gekennzeichnet, dass** die Verbindungsmittel (12) ei-

nen Verbindungsflansch (13) umfassen, welcher parallel zu der Oberfläche der Platte (1,2,3) ist, an welcher der Verbindungsflansch befestigt ist.

3. Wandblock-Element nach Anspruch 2, **dadurch gekennzeichnet, dass** die Verbindungsmittel (12) eine Klebestelle umfassen durch welche der Verbindungsflansch an der Platte (1,2,3) befestigt ist.
4. Wandblock-Element nach Anspruch 3, **dadurch gekennzeichnet, dass** Verbindungsmittel (12) eine Vielzahl von an jedem Verbindungsflansch (13) angeordneten Löchern (14) umfassen, um die Haftung der Klebestelle zu verbessern.
5. Wandblock-Element nach Anspruch 4, **dadurch gekennzeichnet, dass** das Wandblock-Element (2,3) zwei Abstandselemente (8,9) umfasst, welche auf Abstand voneinander sind.
6. Wandblock-Element nach Anspruch 5, **dadurch gekennzeichnet, dass** die Verbindungsmittel (12) Verbindungsflansche (13) umfassen, welche senkrecht aus dem Blechmaterial von den Abstandselementen (8,9) umgebogen sind, um parallel zu sein mit den inneren Oberflächen (21) der Platten (2,3), wobei besagte Verbindungsflansche mit Klebestellen an den gesägten inneren Oberflächen von der ersten Platte (6) verbunden sind.
7. Wandblock-Element nach Anspruch 6, **dadurch gekennzeichnet, dass** die Abstandselemente (8,9) in den inneren Raum (10) hinein angeordnet sind, wobei die Abstandselemente (8,9) beabstandet von den Endoberflächen (23) der Platten angeordnet sind.
8. Wandblock-Element nach einem der Ansprüche 1 bis 7, **dadurch gekennzeichnet, dass** das Abstandselement (8, 9) eine obere Kante (24) umfasst, die eine oder mehrere Aussparungen (25) aufweist, welche auf Abstand (h) unterhalb der oberen Oberfläche der Platten angeordnet sind, wobei ein Bewehrungsstab (26) auf der Auflage der Aussparungen angeordnet werden kann.
9. Wandblock-Element nach einem der Ansprüche 1 bis 8, **dadurch gekennzeichnet, dass** das Abstandselement (8, 9) ein oder mehr Löcher (27) umfasst, um einen Pfad für das Füllmaterial (11) zur Verfügung zu stellen, wie zum Beispiel Gussbeton.
10. Wandblock-Element nach einem der Ansprüche 1 bis 9, **dadurch gekennzeichnet, dass** das Abstandselement (8,9) einen Versteifungsflansch (28) an der unteren Kante (29) des Abstandselementes umfasst.

11. Wandblock-Element nach Anspruch 10, **dadurch gekennzeichnet, dass** der Versteifungsflansch (28) senkrecht aus der Ebene des Blechmaterials des Abstandselementes (8,9) gebogen ist.
12. Wandblock-Element nach einem der Ansprüche 1 bis 11, **dadurch gekennzeichnet, dass** die Dicke der Natursteinplatte 1 bis 8 cm ist.
13. Wandblock-Element nach einem der Ansprüche 1 bis 12, **dadurch gekennzeichnet, dass** das Wandblock-Element (1,2,3) äußere Dimensionen hat, welche in Konformität mit den zusammengesetzten Betonmauerwerkeinheitsstandards sind.

Revendications

1. Élément de bloc pour mur (1, 2, 3), comprenant

- un premier panneau (6) et un deuxième panneau (7), au moins ledit premier panneau (6) étant une dalle de pierre naturelle, et
- un ou plusieurs éléments d'écartement (8, 9) en métal destinés à placer et unir de manière adjacente le premier panneau (6) et le deuxième panneau (7) en parallèle et à distance l'un de l'autre, et
- un espace intérieur (10) défini par les panneaux entre les panneaux, espace intérieur dans lequel peut être placé un matériau de remplissage (11), tel que du béton coulé, lesdits éléments d'écartement présentant, chacun, des moyens de connexion (12) destinés à fixer au moins le premier panneau aux éléments d'espacement,

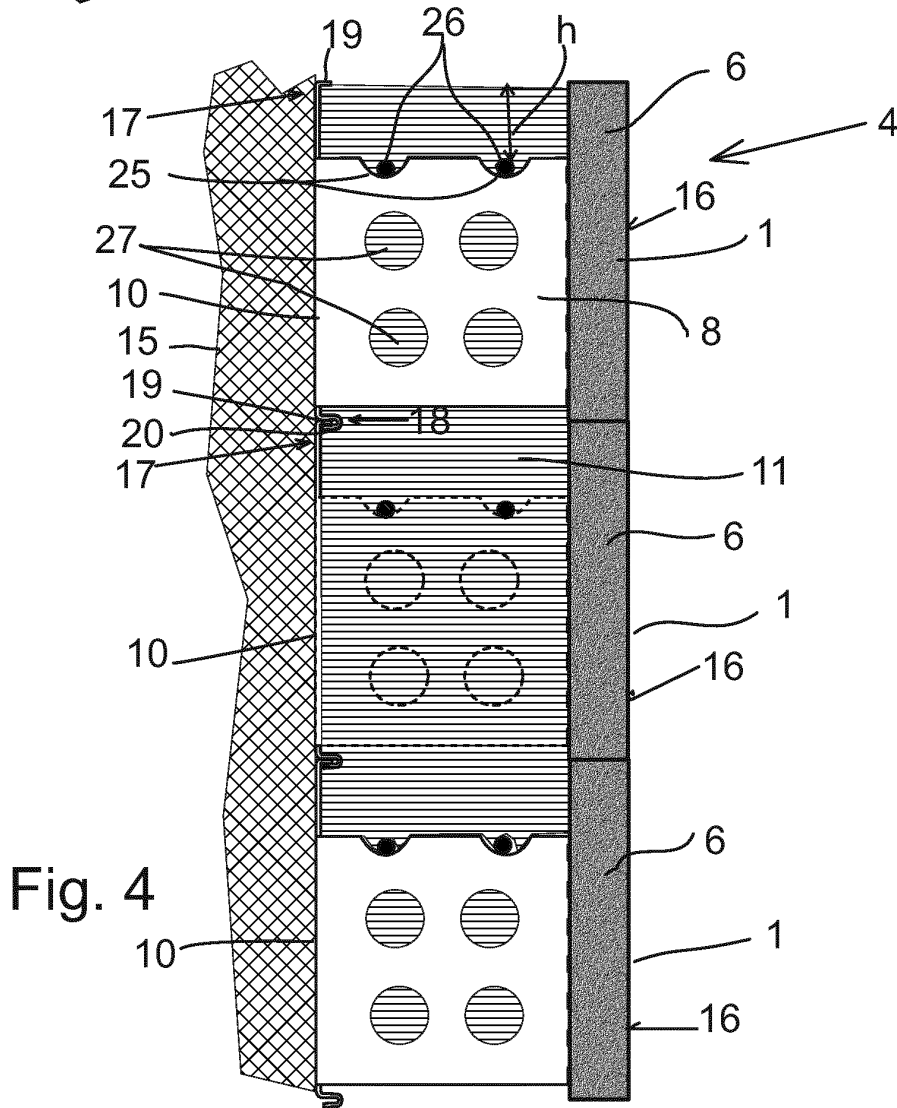
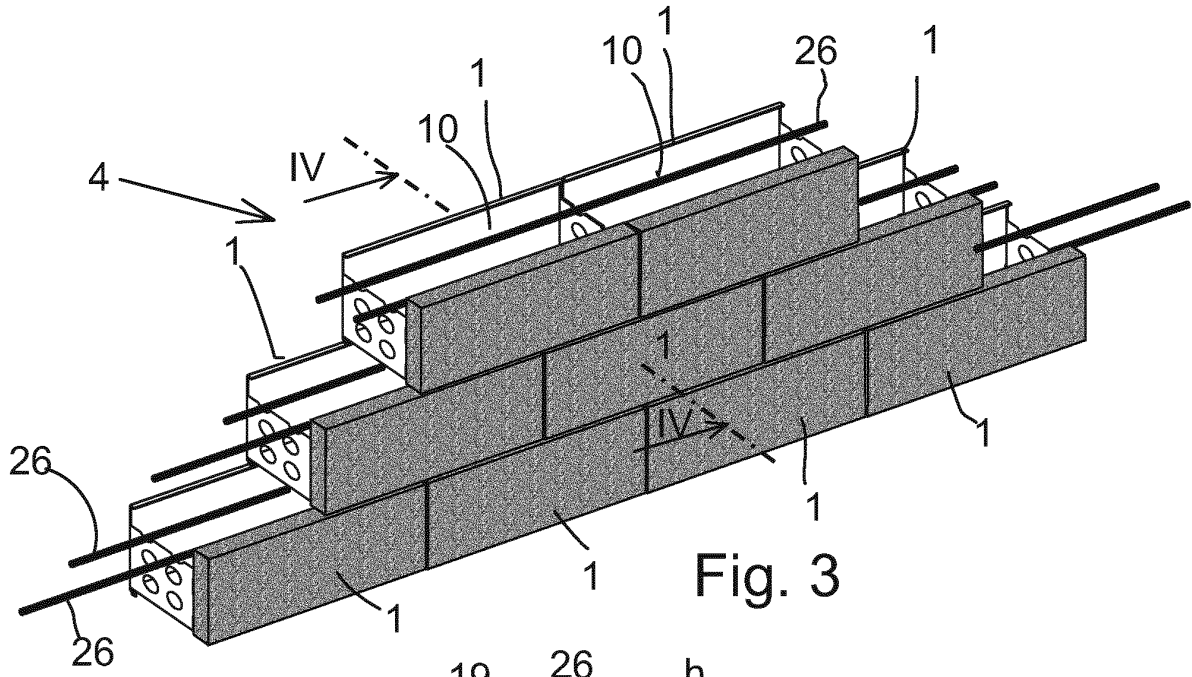
caractérisé par le fait que le deuxième panneau (7) est réalisé en une tôle métallique et constitue une structure solidaire des éléments d'écartement (8, 9), ledit élément de bloc de mur (1) étant destiné au mur de soutènement (4) dans lequel le deuxième panneau (7) se trouve contre le sol (15) et le premier panneau (6) présente une surface extérieure (16) comme façade de l'élément de bloc de mur (1); que le deuxième panneau (7) et les éléments d'écartement (8, 9) sont formés d'une seule pièce découpée en tôle, les deux éléments d'espacement (8, 9) étant pliés des extrémités du deuxième panneau (7) de manière perpendiculaire par rapport au plan du deuxième panneau; et que le deuxième panneau (7) comprend un bord supérieur (17) et un bord inférieur (18), ledit bord supérieur (17) présentant un coude de bord (19) qui est orienté de manière perpendiculaire vers le premier panneau (6), et ledit bord inférieur (18) présentant un réceptacle (20) qui s'ouvre dans une direction opposée par rapport à la direction du coude de bord, le réceptacle étant adapté pour

recevoir en son intérieur le coude de bord d'un autre élément de bloc de mur.

2. Élément de bloc de mur selon la revendication 1, **caractérisé par le fait que** les moyens de connexion (12) comprennent une bride de connexion (13) qui est parallèle à la surface du panneau (1, 3) auquel est fixée la bride de connexion.
3. Élément de bloc de mur selon la revendication 2, **caractérisé par le fait que** les moyens de connexion (12) comprennent un joint de colle par lequel la bride de connexion (13) est fixée au panneau (1, 2, 3).
4. Élément de bloc de mur selon la revendication 3, **caractérisé par le fait que** les moyens de connexion (12) comprennent une pluralité de trous (14) aménagés dans chaque bride de connexion (13) pour améliorer la prise du joint de colle.
5. Élément de bloc de mur selon la revendication 4, **caractérisé par le fait que** l'élément de bloc de mur (2, 3) comprend deux éléments d'espacement (8, 9) qui se trouvent à distance l'un de l'autre.
6. Élément de bloc de mur selon la revendication 5, **caractérisé par le fait que** les moyens de connexion (12) comprennent des brides de connexion (13) qui sont pliées de manière perpendiculaire à partir du matériau en tôle des éléments d'écartement (8, 9) de manière à être parallèles aux surfaces intérieures (21) des panneaux (2, 3), lesdites brides de connexion étant connectées par des joints de colle à la surface intérieure sciée du premier panneau (6).
7. Élément de bloc de mur selon la revendication 6, **caractérisé par le fait que** les éléments d'écartement (8, 9) sont placés dans l'espace intérieur (10), les éléments d'écartement étant situés à distance des surfaces d'extrémité (23) des panneaux.
8. Élément de bloc de mur selon l'une quelconque des revendications 1 à 7, **caractérisé par le fait que** l'élément d'écartement (8, 9) comprend un bord supérieur (24) présentant une ou plusieurs encoches (25) qui sont situées à une distance (H) au-dessous de la surface supérieure des panneaux, une barre de renforcement (26) pouvant être placée sur le support des encoches.
9. Élément de bloc de mur selon l'une quelconque des revendications 1 à 8, **caractérisé par le fait que** l'élément d'écartement (8, 9) comprend un ou plusieurs trous (27) pour créer un trajet pour le matériau de remplissage (11), tel que du béton coulé.
10. Élément de bloc de mur selon l'une quelconque des revendications 1 à 9, **caractérisé par le fait que**

l'élément d'écartement (8, 9) comprend une bride de raidissement (28) au bord inférieur (29) de l'élément d'écartement.

11. Élément de bloc de mur selon la revendication 10, **caractérisé par le fait que** la bride de raidissement (28) est courbée de manière perpendiculaire par rapport au plan du matériau de tôle de l'élément d'espace (8, 9). 5
10
12. Élément de bloc de mur selon l'une quelconque des revendications 1 à 11, **caractérisé par le fait que** l'épaisseur de la dalle de pierre naturelle est de 1 à 8 cm. 15
13. Élément de bloc de mur selon l'une quelconque des revendications 1 à 12, **caractérisé par le fait que** l'élément de bloc de mur (1, 2, 3) présente des dimensions extérieures qui sont conformes aux normes de l'unité de maçonnerie en béton de granulats. 20
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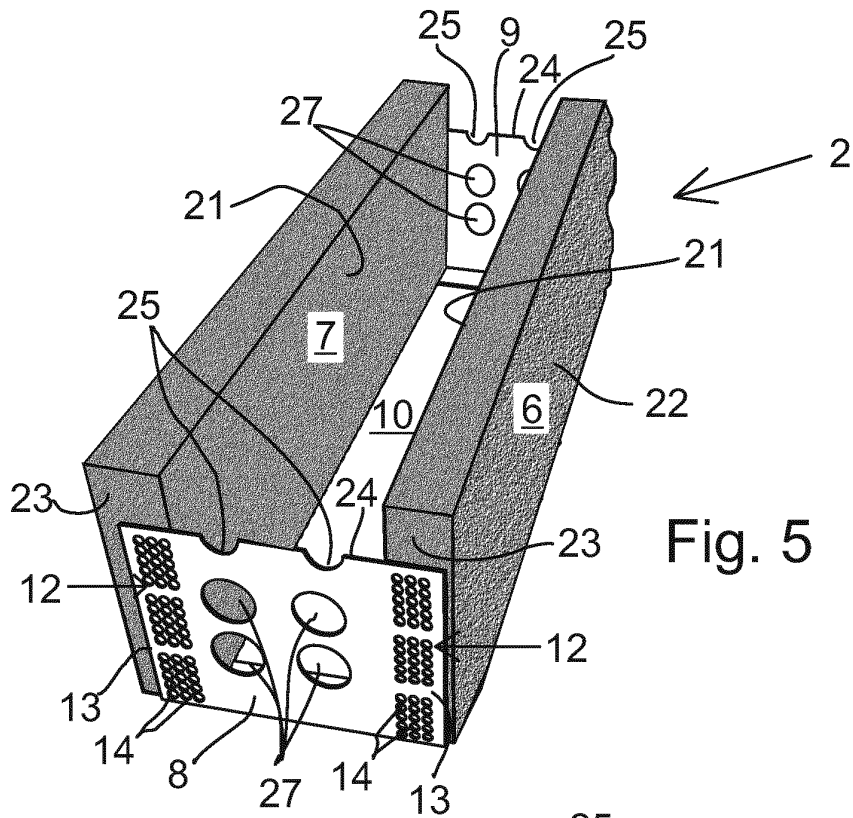


Fig. 5

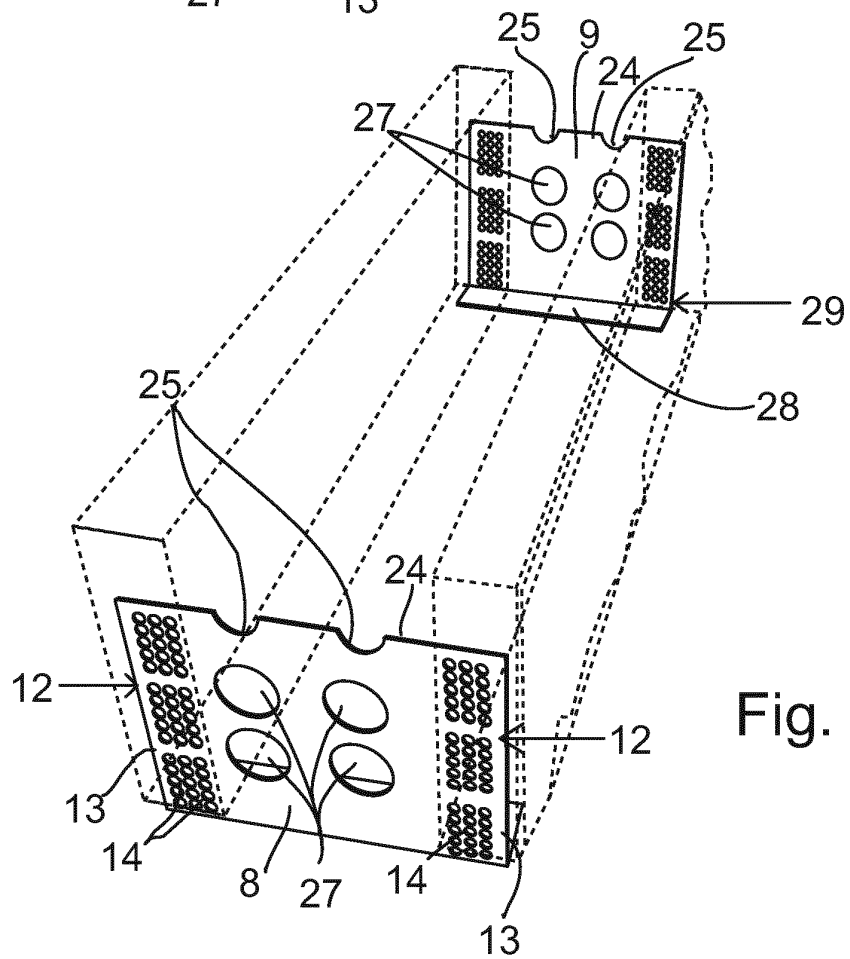


Fig. 6

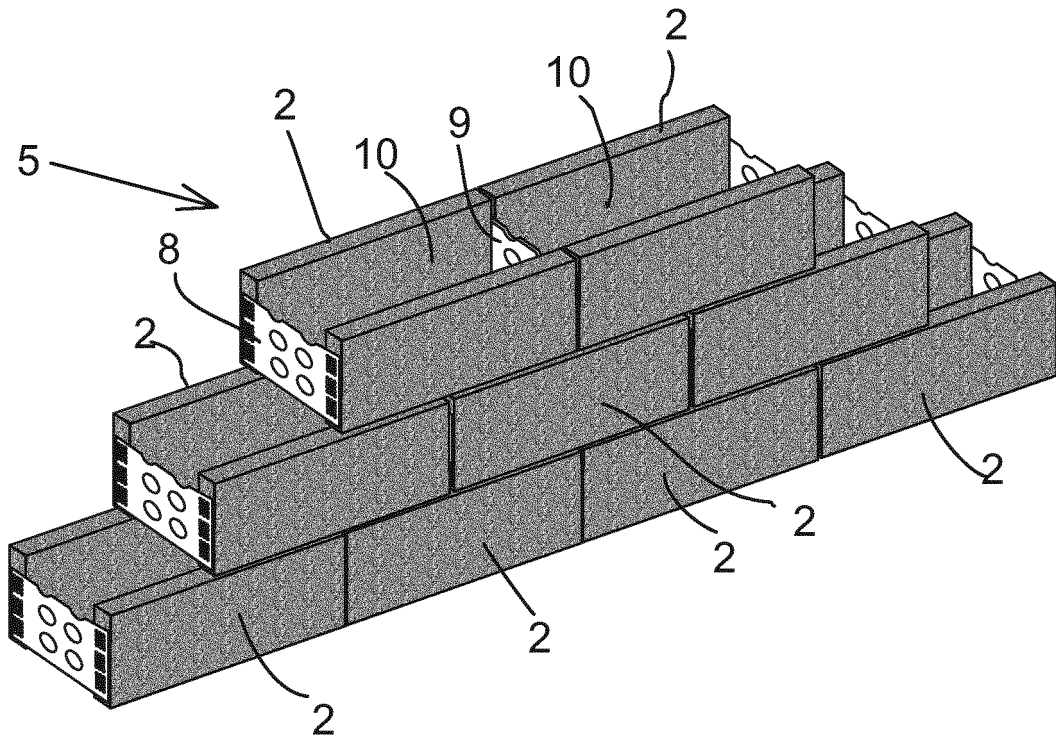


Fig. 9

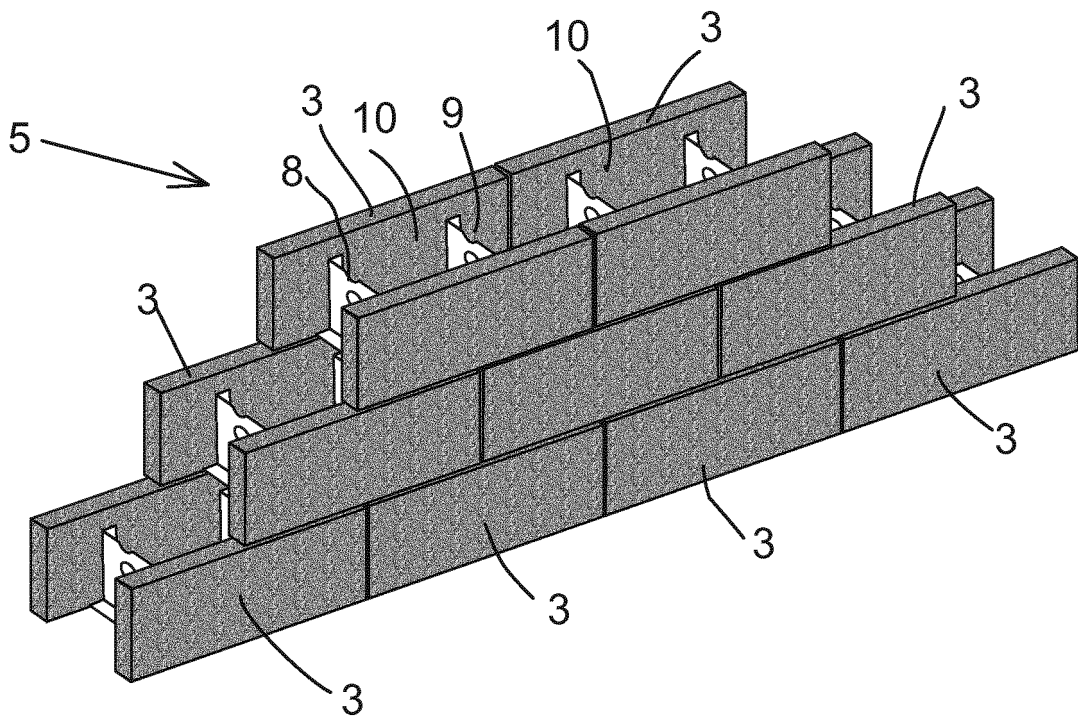


Fig. 10

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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