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15 Construction block and wall made up of at least two such superimposed blocks

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The present invention relates to a construction block and a wall made up of at least two such superimposed blocks.

25 More particularly, this wall may serve as a breast wall with the possibility of integrating one or more recesses passing through the construction blocks of said wall, these recesses being able for example to receive earth in order to plant therein covering plant elements. Such a wall serving as a breast wall may thus be several metres high. This wall may also serve to produce various edifices such as a terraced
30 wall, an arrangement of embankments, a protective merlon or an anti-noise merlon.

According to the prior art, illustrated in particular by the document US-A-5678958, superimposing at least two construction blocks is known. In order to hold a construction block superimposed on a lower block, provision is made for providing the bottom face of the superimposed construction block with at least one protrusion
35 entering a recess in the lower construction block or coming into abutment against a part of said lower block in order to prevent tilting of the superimposed block and to hold it in position on the lower block.

It turned out that such a connection between two superimposed blocks posed problems and offered little strength. In particular, the use of a protrusion and a recess could cause rupture of the recess by shearing, in particular when the wall serves as a breast wall and is subjected to a substantially horizontal thrust by the supported elements, for example earth. This may cause the forward movement of a superimposed block with respect to the lower block.

One explanation of this low strength of the connection lies in the fact that the bearing of the superimposed block on the lower block is deficient since it is unequally distributed because of the small surface area of the projections. In addition, the position of the projections can no longer be optimum for counteracting the horizontal thrust that the superimposed block is subjected to with respect to the lower block.

The same difficulty is encountered in the document DE-U1-296 08 704, which shows protrusions projecting on the surface of the faces of the block to be assembled.

The problem at the basis of the present invention is to consolidate the connection between two construction blocks of a wall so that this connection can effectively withstand various forces that are imposed on it, in particular a different horizontal thrust exerted on construction blocks superimposed on each other or on one another.

In order to achieve this objective, a construction block intended to be superimposed on at least one similar construction block is provided according to the invention, said block comprising a top face, a bottom face, a front face, a rear face and longitudinal faces as well as one alveolus, the at least one alveolus passing through the block from its bottom face to its top face and being delimited by solid longitudinal and transverse walls, the intersections of which form alveolus corner regions, said construction block comprising at least one protrusion projecting beyond the bottom face and configured so as to allow connection with the similar construction block, characterised in that it comprises a beam at at least one alveolus corner region, the beam passing through the block from its bottom face towards its top face and extending, in a first direction of its cross-section, over part of a longitudinal wall, and, in a second direction of its cross-section, over part of a transverse wall, the at least one protrusion being formed by one end of the beam.

The beam thus formed is a mechanical reinforcement element projecting inside an alveolus at an intersection corner of two walls delimiting said alveolus.

In this way, the relative locking function of the block with respect to other blocks is achieved, at least partly, by at least one beam that is a supplementary structural element. The beam also serves to reinforce the cohesion of the walls of the block at the corner which is a discontinuity region, and therefore a region of concentration of mechanical forces. In addition, in the case of a rupture of the end of the beam that

replaces the traditional protrusions in continuity above the walls of the block, the walls are not involved and do not risk being damaged.

Thus the block has increased strength at the force concentration regions, which are the alveolus corners. Having in this way formed an effective mechanical reinforcement, the protrusions disposed at the beams have better strength, in particular shear strength, compared with projecting protrusions along the thickness of the walls of the block. It should also be noted that the beams produce, at the same time as the protrusions, mechanical assemblies associating, in a similar manner to a triangulation, the transverse and longitudinal walls.

The block according to the invention may also optionally have at least any one of the following features:

- It comprises a first group of two alveoli on either side of an internal longitudinal wall, each alveolus in the first group comprising a beam, the beams being symmetrical in relation to the internal longitudinal wall.

- The beams of the alveoli in the first group are situated on alveolus corner regions situated close to opposite longitudinal faces.

- It comprises, immediately to the rear of its front face, a central alveolus passing through said block and comprising two beams on alveolus corner regions situated close to opposite longitudinal faces.

- The two beams of the central alveolus extend over a transverse wall situated behind the central alveolus in relation to the front face, the two beams of the alveoli in the first group extend over a transverse wall situated in front of the alveoli in the first group in relation to the front face.

- It comprises a second group of two alveoli on either side of the internal longitudinal wall and between the central alveolus and the first group.

- The second group does not comprise a beam.

- The longitudinal walls are thicker than the transverse walls.

- Each protrusion has a substantially rectangular or square cross-section.

- The rear face comprises at least one rear beam with one end projecting beyond the bottom face forming a rear protrusion.

- The front face comprises, projecting on its edge situated on the bottom face, a front protrusion.

- The heights of projection of the protrusions, of the at least one rear protrusion and of the front protrusion are identical.

- It has a substantially parallelepipedal shape.

- It has a rounded or bevelled front face.

The invention also concerns a wall, characterised in that it is formed by at least two such construction blocks, a top construction block being superimposed on at least

one bottom block of similar construction, at least one protrusion on the respectively top or bottom block entering and advantageously producing an abutment in an alveolus in the respectively bottom or top block.

Advantageously, the wall incorporates, between two superimposed construction
5 blocks, a geogrid having meshes, each protrusion on the top construction block being conformed so as to enter one of the meshes of said grid.

Advantageously, at least one block of the wall is secured to at least one similar block adjacent and disposed at the same level, connection means of the tenon and mortise type being provided between at least two adjacent blocks.

10 Advantageously, the wall comprises at least two adjacent bottom blocks, the same superimposed block at least partially covering the two adjacent bottom blocks.

Advantageously, the superimposed block is offset while being recessed or projecting with respect to the bottom block or blocks.

Advantageously, the at least two blocks on the same level are offset with
15 respect to each other so that their front faces form a non-rectilinear front.

Advantageously, the superimposed top block has an inclination with respect to the bottom block or blocks.

Preferentially, the construction block comprises a front protrusion projecting on the edge of its front face situated on the bottom face, the open protrusion being
20 configured so as to be applied, by its flanks, to the wall of the front face of the bottom construction block.

Other features, aims and advantages of the present invention will emerge from a reading of the following detailed description and with regard to the accompanying drawings given by way of non-limitative example and in which:

- 25 - Figure 1 is a schematic representation of a view from below in perspective of a construction block according to a first embodiment of the present invention, this figure showing in particular the protrusions for connecting the block to at least one similar block on which it is superimposed,
- Figure 2 is a schematic representation of a view from below of the
30 construction block according to Figure 1 and in accordance with the present invention,
- Figure 3 is a schematic representation of a view from below in perspective of a construction block according to a second embodiment of the present invention, this second form differing essentially from the first form by the
35 configuration of the front face,
- Figure 4 is a schematic representation of a view from below of a wall according to the present invention, said wall being formed by the

superimposition of two levels of construction blocks, each superimposed construction block being mounted straddling two bottom construction blocks,

- Figure 5 is a schematic representation of a plan view of a wall with blocks organised in levels with a batter,

5 - Figure 6 is a schematic representation revealing the capacity for stacking the blocks at 90° in a stable fashion despite the protrusions, for example for palletisation,

- Figure 7 illustrates in a similar manner to Figure 6 a stacking in parallel superimposition of the blocks, for example for palletisation,

10 - Figure 8 shows a wall in which a geogrid cooperates with the blocks,

- Figures 9 and 10 show in more detail the cooperation in Figure 8,

- Figure 11 shows a variant of a block according to the invention,

15 - Figures 12 to 16 present examples revealing the multiplicity of assemblies that can be achieved by the block of the invention, examples illustrated with the block of Figure 11.

Figures 1 and 2 show a construction block 1 according to a first embodiment of the invention, while Figure 3 shows a second embodiment of the invention.

Hereinafter, reference will first of all be made to these three figures for describing the features that are common to them.

20 As will be better described subsequently with regard to Figures 4 and 5 in particular, the construction block 1 is intended to be superimposed on at least one similar construction block in order to construct a wall that can serve for example as a breast wall.

In the embodiments that follow, non-limitatively, the connection means in the form of protrusions are formed on the bottom face of the blocks, in order to cooperate, in superimposition, with alveoli in bottom blocks. The orientation of the block 1 may however be reversed with its bottom face directed upwards so that the protrusions project upwards. The adjective "bottom" must therefore be understood without limitation in relation to the orientation that will be given to the block when mounting for cooperating with superimposed blocks. The blocks therefore have two potential orientations, protrusions upwards or protrusions downwards.

In Figures 1 to 3, the construction block 1 has a substantially parallelepipedal shape but this is not obligatory, the block 1 also being able to have another shape with for example a triangular longitudinal cross-section or a trapezoidal shape. The block 1 comprises a front face 8 and a rear face 10 joined by a top face, a bottom face and longitudinal faces. The top and bottom faces are hollow, having at least one internal hollow part.

It should be noted that, in Figures 1 to 3, the front face 8 of the block 1 has been modified so as not to correspond exactly to a side of the parallelepiped. This feature, which is not essential, since the block 1 may also have exactly the form of a parallelepiped, will be described more fully below.

It is preferred for the top and bottom faces to be flat and parallel to each other. Moreover, the whole of the block 1 is advantageously produced in a single piece, including the beams 11 described below in detail, that is to say in a single piece of a single material.

The block 1 comprises alveoli 2, the number of which is not limited. It preferentially has a first group of alveoli and a central alveolus 7 that are equipped with beams 11 described below.

In Figures 1 to 3, the internal hollow part is formed by two groups of two alveoli 2, each of the alveoli 2 passing entirely through the block 1 from its bottom face to its top face, the two groups being delimited by solid longitudinal 3 and transverse 4 walls.

The four alveoli 2 are disposed in two consecutive groups over the length of the block 1, the two groups being separated by a common transverse wall 12. However, this is not limitative and a block 1 according to the present invention may contain one or more alveoli 2 of various forms and with a distribution different from the one illustrated in Figures 1 to 3.

Each of the two groups of alveoli 2 occupies the major part of the width of the construction block 1, leaving as solid parts in said block 1 only the two longitudinal sides 3 delimiting a group of alveoli 2 on each longitudinal side of the block 1 and an internal longitudinal wall 6 between two alveoli 2 in the same group. The two groups of alveoli 2 advantageously occupy two thirds of the length of the block 1, essentially the middle and rear parts of said block 1, the front part of said block 1 being able to comprise a hollow 7, as will be seen more precisely subsequently.

In order to connect a top construction block completely or partially superimposed on a similar bottom construction block, means are provided for connecting the top block to the bottom block at least partially covered by said top block.

These connection means comprise protrusions 5 projecting from the top block in the direction of its height, each of these protrusions 5 being associated with a respective alveolus 2 carried by the bottom block and being disposed on the bottom face of the block 1.

The protrusions are placed so as to allow varied relative mounting configurations of the blocks 1 and are, according to the invention, formed in a characteristic manner in order to offer high mechanical strength. To this end, the protrusion or protrusions 5 are each formed by one end of a beam 11. One example of beams 11 is given, with as an example a square cross-section, in Figures 1 to 3. The

beams 11 extend along the height of the block, between the top face and the bottom face, and are placed in an alveolus 2. More precisely, each beam 11 is situated in an alveolus corner region, that is to say at the point of an intersection between a longitudinal wall and a transverse wall delimiting said alveolus 2. In the illustrations, the corner regions are substantially at a right-angle but this case is not limitative. The beam 11 cooperates both with a transverse wall and with the corresponding longitudinal wall, being continuous therewith inside the alveolus 2. Thus the beams 11 are reinforcement portions of the alveolus corners 2 offering better strength. Because of this, it will be noted that the thickness of some walls, in particular transverse walls, may be reduced, for example to between 50% and 80% of the thickness of the longitudinal walls 3. Forming the protrusions 5 in a distal region of the beams 11 is advantageous since this offers great strength. This also makes it possible to benefit from regions with a large cross-section of the protrusions. Furthermore, in the case of breakage of a protrusion 5, this does not damage the longitudinal and transverse walls of the block 1.

The cross-section of the beams 11 is for example configured so as to have, in length and width, a dimension of between 60% and 140% of the thickness of the longitudinal walls 3. In general, it is arranged for the beams 11 to occupy less than 50% of the corresponding inside dimension of the alveolus 2 in which it is placed.

It will easily be understood that, in the case of a beam with a polygonal cross-section, for example rectangular, two adjacent faces of the beam match two internal walls of the alveolus and that the other two faces of the beam form an assembly projecting towards the inside of the alveolus, for example an angle, preferably a right angle, entering the alveolus.

Moreover, advantageously, the protrusion that is in line with a beam does not extend laterally beyond the surface of the beam so that the forces to which the protrusions are subjected are transmitted to the rest of the block only via the beam.

In Figures 1 to 3, the block 1 comprises first of all two beams 11 each in an alveolus 12 in the first group of alveoli, here towards the rear face 10 of the block 1. Preferably, the beams equip corner regions situated towards the front, that is to say furthest towards the front face 8, and advantageously these are the outermost corner regions, that is to say close to the longitudinal faces of the block 1.

As can be seen in Figures 1 to 3, each protrusion 3 of a block 1 according to the present invention has a substantially rectangular or square cross-section, but this is not obligatory. The protrusions 5 preferably have at least one right angle in their corner configured so as to be applied to the walls of the alveolus of the block with which they cooperate so as to form a double abutment, in two perpendicular directions (transverse and longitudinal).

The protrusions 5 advantageously have the same cross-section as the rest of the beams 11.

Referring again to Figures 1 to 3, the block 1 may have, towards its front face 8, a central alveolus 7 passing through said block 1.

5 In the example, the central alveolus 7 has, at two corner regions, beams 11 carrying protrusions 5. To vary the absorption of forces, it is preferred for the beams 11 in the first group of alveoli 2 to cooperate with an alveolus wall, in the transverse direction, oriented in the opposite direction to that of cooperation of the beams 11 of the central alveolus 7, relative to the front face 8. Thus, in the example, the take-up of
10 abutment between beams 11 and transverse wall 4 takes place towards the rear whereas it takes place towards the front for the beams 11 cooperating with the transverse wall 12 for the first group of alveoli.

Referring still to Figures 1 to 3, the rear face 10 of the block 1 may have rear beams 13, *these forms being able to improve the aesthetic appearance of the block 1*
15 or improve the rear anchoring of the construction block 1 in the supported elements, for example earth.

The rear beams 13 may also serve for fixing a geogrid 16. In the example, two beams 13 are produced symmetrically in relation to the internal longitudinal wall 6 which, preferentially, constitutes a symmetry plane for the whole of the block 1. The
20 beams 13 may have a larger cross-section than the beams 11.

By forming a relief on the rear face 10, the beams 13 also make it possible to trap noise and therefore have a function of acoustic insulation when the rear face is exposed to the outside of the wall 17.

Advantageously, the beams 13 also carry protrusions 14 projecting on the
25 bottom face. These protrusions 14 supplement the horizontal stability of the block 1 when it is placed, for example, on the ground or on other blocks 1, for palletisation or for assembling a wall.

The stability may be supplemented by a protrusion 15 carried by the wall of the front face 8, projecting along its thickness, beyond the bottom face.

30 Advantageously, all the protrusions 5, 14, 15 have the same projection height. They also preferentially have a flat distal surface. Figures 6 and 7 illustrate in this context that the blocks may then be easily superimposed for storage and transport, either in parallel (Figure 7) or by alternating blocks by levels offset by 90° (Figure 6). The distal surface of the protrusions 5, 14, 15 then constitutes an abutment surface
35 distributed over various points on the block 1.

It will be noted that the protrusion 15 is optionally at the centre of the width of the front face.

It preferentially comprises inclined flanks joining the external face of the block and the internal face of the central alveolus 7. The width of the protrusion 15 will preferentially decrease towards the inside of the block 1. The inclined flanks serve to offer contact regions with the front face 8 (or other parts) of superimposed blocks. Figure 8 gives an example of this. The angle of the inclined flanks may be identical to that of the intermediate side 9 of the front face 8.

In Figures 1 to 2, the front face 8 of the construction block 1 advantageously in the form of a parallelepiped is bevelled and has a plurality of facets while in Figure 3 the front face 8 of the construction block 1 has a rounded shape. This corresponds to a form of front face 8 chosen to constitute the most visible part of the wall desired.

Likewise, in Figures 1 and 2, the central alveolus 7 of the front part of the construction block 1 is polygonal in shape comprising several sides 9, while in Figure 3 the central alveolus 7 has a rounded part 9a forming its portion oriented towards the front of the block 1.

Figure 8 shows the covering of the bottom face of two adjacent blocks 1 with a geogrid 16 having meshes 16a. At least one protrusion 5 on the construction blocks 1 is conformed so as to be able to enter one of the meshes 16a of said grid 16. This makes it possible to increase the horizontal holding of a wall made from superimposed blocks, the geogrid 16 limiting the movements of the protrusions 5 either towards the front or towards the rear, or laterally, the geogrid 16 being able in particular to provide connection to an embankment. This cooperation also appears in Figures 9 and 10.

It may be necessary to cut, with a cutter for example, meshes of the geogrid 16 for certain protrusions, in particular the protrusions 14, to pass through. The protrusions 5 of the alveolus 7 may also serve for holding the geogrid.

Figure 4 shows an embodiment of a wall made from at least two construction blocks, a bottom construction block receiving at least one similar construction block being superimposed thereon and at least partially covering it, at least one protrusion on the top block entering an alveolus in the bottom block.

This configuration may be employed to form noise screens of a breast wall.

Figure 4 shows a wall 17 formed by superimposing two levels of construction blocks, each construction block 1inf of a bottom level being straddled by two top construction blocks respectively 1 and 1', 1' and 1'', 1'' and 1'''.

Thus the bottom construction block 1inf furthest to the left in Figure 4 is covered with regard to its first longitudinal half furthest to the right by the top construction block 1, its other longitudinal half being covered by the top construction block 1' adjacent to the aforementioned top construction block 1.

The other three bottom construction blocks 1inf are half covered in the same way by two longitudinal blocks, respectively 1' and 1'', 1'' and 1'''. The bottom

construction block 1_{inf} furthest to the right in Figure 6 is for example covered with regard to its first longitudinal half furthest to the left by the top construction block 1'''.

Each bottom construction block 1_{inf} has two groups of two alveoli 2_{inf}, that is to say four alveoli, while each top construction block 1, 1', 1'', 1''' is provided with four protrusions 5, said protrusions 5 entering respectively an associated alveolus 2_{inf} carried by a bottom construction block 1_{inf}. Two protrusions 5 on a top construction block 1, 1', 1'', 1''' enter a bottom construction block 1_{inf} while the other two protrusions 5 on said top construction block 1, 1', 1'', 1''' enter the bottom construction block directly adjacent to the aforementioned bottom construction block 1_{inf}.

It is possible that the same level of construction blocks may not be aligned but forms a non-rectilinear edge, for example a curve with a convex or concave edge, their front or respectively rear faces then being kept spaced apart from each other.

The example in Figure 4 shows that a face of the assembly is formed by combining the front faces of the blocks and that the opposite face is formed by combining the rear faces of the blocks. Each of these two assembly faces may form the facade of the structure, that is to say the surface exposed to the outside, the other face being oriented on the bank side.

It is also possible that the superimposition of construction blocks of a top level with construction blocks of a bottom level may be done with an inclination with respect to the horizontal, this inclination being able to change according to the height of the levels in the wall. The various levels may also be offset towards the rear of the wall the more the height of said wall increases, but the contrary is also possible. This is particularly advantageous when it is necessary for the wall to follow a bank or a wall to be consolidated. This is the case with the illustration given in Figure 5 in plan view.

It is also possible for the wall to have an inclination with respect to the vertical, this inclination being able for example to be 15°. In this case, the offsets in a horizontal plane of the rows of blocks provide, at hollows 7, locations for putting plants in the block stack. This configuration may also serve as a noise-protection merlon.

Figure 11 presents a variant of the block in Figure 1 in which the protrusions 5 of the beams 11 are the only elements projecting from the face of the block. The front protrusions 15 and rear protrusions 14 are absent in this case, which may increase the possibilities of combining the superimposed blocks.

Figures 12 to 16 show examples thereof. In Figure 12, a wall 17 is formed with a row of blocks, the front face of which is directed in a first direction, and with a second row, superimposed, with a front face in the opposite direction. This alternation of directions may be continued on other rows. The configuration in Figure 14 is similar but the bottom and top rows have a different relative longitudinal placing, the protrusions 5 and the alveoli cooperating differently. The result is visible in perspective in Figure 13.

Another variant alternates the directions of the blocks in the same row as shown in Figure 15. This is the case for all the rows. This arrangement affords better sound insulation, the reliefs on the facade being numerous and of varied shapes in order to trap the sounds. The cooperation of the protrusions and alveoli in this case is illustrated in Figure 16. In all cases it is also possible to offset the rows longitudinally so as to produce a batter.

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REFERENCES

1. Construction block
- 1a-1d. Construction blocks of various levels
- 5 1'-1'''. Adjacent construction blocks
- 1inf. Bottom construction block
2. Alveolus
- 2a-2d. Alveolus
- 2inf. Alveolus
- 10 3. Longitudinal wall
4. Transverse wall
5. Protrusion
- 5 inf. Protrusion
6. Internal longitudinal wall
- 15 7. Central alveolus
8. Front face
9. Side
- 9a. Rounded part
10. Rear face
- 20 11. Beam
12. Common transverse wall
13. Rear beam
14. Rear protrusion
15. Front protrusion
- 25 16. Geogrid
- 16a. Mesh
17. Wall

CLAIMS

1. A construction block (1) intended to be superimposed on at least one similar construction block (1inf), said block (1) comprising a top face, a bottom face, a front face (8), a rear face (10) and longitudinal faces as well as one alveolus (2, 7), the at least one alveolus (2, 7) passing through the block (1) from its bottom face to its top face and being delimited by solid longitudinal (3, 6) and transverse (4, 12) walls, the intersections of which form alveolus corner regions, said construction block (1) comprising at least one protrusion (5) projecting beyond the bottom face and configured so as to allow connection with the similar construction block (1inf),

characterised in that it comprises a beam (11) at at least one alveolus corner region, the beam (11) passing through the block (1) from its bottom face towards its top face and extending, in a first direction of its cross-section, over part of a longitudinal wall (3, 6), and, in a second direction of its cross-section, over part of a transverse wall (4, 12), the beam (11) projecting inside the alveolus, the at least one protrusion (5) being formed by one end of the beam (11).

2. A construction block (1) according to the preceding claim, comprising a first group of two alveoli (2) on either side of an internal longitudinal wall (6), each alveolus (2) in the first group comprising a beam (11), the beams (11) being symmetrical in relation to the internal longitudinal wall (6).

3. A construction block (1) according to one of the preceding claims, in which the beams (11) of the alveoli (2) in the first group are situated on alveolus corner regions situated close to opposite longitudinal faces.

4. A construction block (1) according to one of the preceding claims, comprising, immediately to the rear of its front face (8), a central alveolus (7) passing through said block (1) and comprising two beams (11) on alveolus corner regions situated close to opposite longitudinal faces.

5. A construction block (1) according to the preceding claim in combination with one of claims 2 or 3, in which the two beams (11) of the central alveolus (7) extend over a transverse wall (4) situated behind the central alveolus (7) in relation to the front face (8), the two beams of the alveoli (2) in the first group extend over a transverse wall (12) situated in front of the alveoli (2) in the first group in relation to the front face (8).

6. A construction block (1) according to the preceding claim, comprising a second group of two alveoli (2) on either side of the internal longitudinal wall (6) and between the central alveolus (7) and the first group.

7. A construction block (1) according to the preceding claim, in which the second group does not comprise a beam.

8. A construction block (1) according to any one of the preceding claims, for which the longitudinal walls (3) are thicker than the transverse walls (4).

9. A construction block (1) according to any one of the preceding claims, for which each protrusion (5) has a substantially rectangular or square cross-section.

10. A construction block (1) according to any one of the preceding claims, in which the rear face (10) comprises at least one rear beam (13) with one end projecting beyond the bottom face forming a rear protrusion (14).

11. A construction block (1) according to any one of the preceding claims, in which the front face (8) comprises, projecting on its edge situated on the bottom face, a front protrusion (15).

12. A construction block (1) according to the preceding two claims in combination, in which the heights of projection of the protrusions (15), of the at least one rear protrusion (14) and of the front protrusion (15), are identical.

13. A construction block (1) according to any one of the preceding claims, which has a substantially parallelepipedal shape.

14. A construction block (1) according to the preceding claim, which has a rounded or bevelled front face (8).

15. A wall (17), characterised in that it comprises at least two such construction blocks (1, 1inf) according to any one of the preceding claims, a top construction block (1) being superimposed on at least one bottom block (1inf) of similar construction, at

least one protrusion (5) on the respectively top or bottom block (1) producing an abutment in an alveolus (2inf) in the respectively bottom (1inf) or top block.

16. A wall according to the preceding claim, which incorporates, between two superimposed construction blocks (1), a geogrid (16) having meshes (16a), each protrusion (5) on the top or bottom construction block (1) being conformed so as to enter one of the meshes (16a) of said grid (16).

17. A wall (17) according to one of the preceding two claims, which comprises at least two adjacent bottom blocks (1inf), at least the same top block (1, 1' to 1''') at least partially covering the two adjacent bottom blocks (1inf).

18. A wall (17) according to the preceding claim, for which the at least two blocks on the same level are offset with respect to each other so that their front faces (8) form a non-rectilinear face.

19. A wall (17) according to any one of the preceding four claims, for which the superimposed top block (1) is offset while being recessed or projecting with respect to the bottom block or blocks (1inf).

20. A wall (17) according to any one of the preceding five claims, for which the superimposed top block (1) has an inclination with respect to the bottom block or blocks (1inf).

21. A wall (17) according to one of the preceding six claims, in which the construction block (1) comprises a front protrusion (15) projecting on the edge of its front face (8) situated on the bottom face, the open protrusion (15) being configured so as to be applied through its flanks on the wall of the front face of the bottom construction block (1).