

A BLOCK FOR THE MORTARLESS CONSTRUCTION OF A WALL

5 The present invention generally relates to wall construction, and more particularly to a block for mortarless construction of a wall, e.g. a wall of a building structure. The invention also relates to a mortarless wall erected using such blocks.

10 The outside masonry walls of buildings are generally constructed using rectangular bricks assembled by mortar, or nailed thin asphalt shingles which are difficult to affix and require a very robust wall.

15 Known in the art is US patent n° 2,341,971 (Antill), which describes a sectionally supported wall for furnaces or other high temperature chambers. The wall comprises an outer metal supporting structure having hanging members for supporting sections of the wall consisting of a series of courses of interengaging refractory rectangular blocks.

20 The blocks in as course have interengaging small projections and recesses to engage with complementary recesses and projections of the adjacent lateral blocks to prevent lateral displacement of the blocks in the course. Certain blocks of the course are also provided with small

25 projections and recesses to engage with the blocks of a course beneath and/or above, to prevent lateral displacement of the courses. However, due to the generally rectangular shape of the blocks, the wall is not adapted for outside construction because water may

30 infiltrate between the blocks through spaces or by cavitation, i.e. due to capillary action and/or under the influence of wind during a rain storm. Furthermore, installation of the blocks may take time because they must follow an appropriate pattern to match with the positions

35 of the hanging members and the supporting structure.

British patent number 5267 relates to a brick for use with



mortar. This British patent does not, however, deal with the problem of how to configure a block or brick for the mortarless construction of a wall. It in particular does not deal with the problem of how to inhibit water infiltration nor how to facilitate drainage of water from
5 between adjacent blocks or bricks.

Also known in the art are US patent n° 1,981,324 (Peterson), 2,141,035 (Daniels), 2,323,661 (Hosbein),
10 2,550, 945 (Steinhage et al.), 2,622,864 (Hasche), 2,823,027 (Coberly), 3,221,614 (Pertien), 3,870,423 (Peitz, Jr.), 4,441,298 (Limousin), 4,936,712 (Glickman), 5,205,675 (Hamel), 5,279,082 (Scholta) and 5,337,527 (Wagenaar), which disclose various types of blocks and
15 wall or pavement structures. However, none of these blocks and wall structures seem to be completely satisfactory in all aspects involved in the fast and steady construction of mortarless walls of buildings.

20 It would be advantageous to have a block for mortarless construction of a wall which is relatively simple in design and inexpensive to manufacture.

It would be advantageous to have a block which may be used
25 without mortar to construct a wall and which may attenuate or inhibit the penetration of water between adjacent like blocks, e.g. due to capillary action and/or the influence of wind. It would also be advantageous to have a block for the mortarless construction of a wall which may
30 facilitate the drainage of water from between adjacent blocks.

It would be further advantageous to have blocks which are interlockable with like blocks so as to form a wall
35 without the need for using mortar.

It would also be advantageous to have blocks which are



able to attenuate deformations in the construction thereof.

5 It would also be advantageous to be able to provide a mortarless wall which is steady and easy to construct.

10 It is to be understood herein that the word "mortar" refers to any binding agent of any kind whatsoever including but not limited to a binding agent based on cement, lime and sand, an adhesive, etc... Thus, the word "mortarless" is to be understood as characterising a wall wherein the blocks are not held together by a binding agent.

15 The present invention in one general aspect relates to a block, for use in the construction of a wall wherein a plurality of like blocks are stacked in successive mortarless overlapping courses so as to define a wall face,

said block comprising

20 two side ends spaced apart by
a top face
a bottom face
a front face and
a rear face

25 said top face comprising a tongue interlock element and a declining face portion, said declining face portion connecting the tongue interlock element to the front face,

30 said bottom face comprising a mortise interlock element and a forward face portion, said forward face portion connecting the mortise interlock element to the front face,

35 said two side ends, said top face, said bottom face, said front face and said rear face being configured such that, when said block and an underlying, like, block form part of the wall and the bottom face of the block engages the



top face of a said underlying, like, block such that the front face of the block defines a portion of the wall face,

5 the tongue interlock element of a said underlying block is able to register in the mortise interlock element of the block so as to be able to interlock both blocks such that relative forward and rearward displacement is inhibited, and
10 the front face of the block is vertically offset downwardly relative to the tongue element thereof.

15 The present invention also relates to a block, for use in the construction of a wall wherein a plurality of like blocks are stacked in successive mortarless overlapping courses so as to define a wall face,
said block comprising

20 two side ends spaced apart by
a top face
a bottom face
a front face and
a rear face
25 said top face comprising a tongue interlock element and a declining face portion, said declining face portion comprising a ledge element and a top intermediate element, said top intermediate element connecting the tongue interlock element to the ledge element, said ledge element connecting the top intermediate element to the front face,
30 said bottom face comprising a mortise interlock element and a forward face portion, said forward face portion comprising a foot element and a bottom intermediate element, said bottom intermediate element connecting the mortise interlock element to the foot element, said foot element connecting the
35 bottom intermediate element to the front face,

said two side ends, said top face, said bottom face, said



front face and said rear face being configured such that,
when said block and an underlying, like, block form part
of the wall and the bottom face of the block engages the
top face of a said underlying, like, block such that the
5 front face of the block defines a portion of the wall
face,

the tongue interlock element of a said underlying
block is able to register in the mortise interlock
element of the block so as to be able to interlock
10 both blocks such that relative forward and rearward
displacement is inhibited,
the front face of the block is vertically offset
downwardly relative to the tongue element thereof,
the foot element of the forward face portion of the
15 block is able to engage the ledge element of the
underlying, like, block.

The present invention further provides a block, for use in
the construction of a wall wherein a plurality of like
20 blocks are stacked in successive mortarless overlapping
courses so as to define a wall face,
said block comprising

two side ends spaced apart by
a top face
25 a bottom face
a front face and
a rear face

said top face comprising a tongue interlock element
30 and a declining drainage face portion, said drainage
face portion connecting the tongue interlock
element to the front face,
said bottom face comprising a mortise interlock
element and a forward face portion, said forward
35 face portion connecting the mortise interlock
element to the front face,



said two side ends, said top face, said bottom face, said front face and said rear face being configured such that, when said block and an underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block such that the front face of the block defines a portion of the wall face,

the tongue interlock element of a said underlying block is able to register in the mortise interlock element of the block so as to be able to interlock both blocks such that relative forward and rearward displacement is inhibited,

the front face of the block is vertically offset downwardly relative to the tongue element thereof,

and

the forward face portion of the bottom face of the block and the drainage face portion of the top face of said underlying, like, block are spaced apart and able to define side walls of a drainage air gap therebetween.

The present invention in particular provides a block, for use in the construction of a wall wherein a plurality of like blocks are stacked in successive mortarless overlapping courses so as to define a wall face, said block comprising

two side ends spaced apart by
a top face
a bottom face
a front face and
a rear face

said top face comprising a tongue interlock element and a declining drainage face portion, said declining drainage face portion comprising a ledge element and a top intermediate face element, said top intermediate face element connecting the tongue



interlock element to the ledge element, said ledge
element connecting the top intermediate face element
to the front face,
said bottom face comprising a mortise interlock
5 element and a forward face portion, said forward
face portion comprising a foot element and a bottom
intermediate face element, said bottom intermediate
face element connecting the mortise interlock
element to the foot element, said foot element
10 connecting the bottom intermediate face element to
the front face,

said two side ends, said top face, said bottom face, said
front face and said rear face being configured such that,
15 when said block and an underlying, like, block form part
of the wall and the bottom face of the block engages the
top face of a said underlying, like, block such that the
front face of the block defines a portion of the wall
face,

20 the tongue interlock element of a said underlying
block is able to register in the mortise interlock
element of the block so as to be able to interlock
both blocks such that relative forward and rearward
displacement is inhibited,

25 the front face of the block is vertically offset
downwardly relative to the tongue element thereof,
the foot element of the forward face portion of the
block is able to engage the ledge element of a said
underlying, like, block, and

30 the bottom intermediate face element of the block
and the top intermediate face element of a said
underlying, like, block are spaced apart and able to
define side walls of a drainage air gap
therebetween.

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The opposite lateral side ends of a block may take on any
desired shape or form. They may for example be shaped to



mate or engage the lateral sides of adjacent like bricks on either side thereof to form a joint of desired shape e.g. flat curved sloped etc. If desired blocks may be placed in block courses so as not to laterally abut.

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A block in accordance with the present invention may take on any desired aspect. A block may for example take on the aspect of a brick, a wall tile, etc.; it may of course take on a more massive aspect as desired. A block may be
10 formed of any suitable material such as for example of concrete, clay, resin or plastic material, or any other mouldable material.

In accordance with the present invention the reference to
15 the expression "declining drainage face portion" is to be understood as referring to a face able to avoid water retention and over which water may freely pass downwardly, i.e. the face is at least substantially free of depressions, holes and the like which trap water. The
20 drainage face portion even if comprising a number of elements is thus nevertheless configured to have an overall slope such that when a block is place in a wall, water is able to flow down the drainage face without being trapped or retained thereby.

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It is also to be understood, in accordance with the present invention that the reference to "a drainage air gap" is a reference to a gap, chamber, aperture, hole, slit and the like which is sized and configured for
30 attenuating the infiltration of water between the block and a said underlying, like, block and/or for facilitating the drainage of water from therebetween down the drainage face mentioned above.

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The tongue and mortise elements of a block may take on any desired or necessary configuration. It is, however, to be kept in mind that these elements are to respectively



- cooperate with the mortis and tongue elements of like upper or underlying block(s) as the case may be such that when such blocks are stacked together the complementary tongue and mortise elements thereof define a nesting pair
- 5 of interlocked elements able to inhibit displacement of the blocks relative to each other by forces acting for example perpendicularly to the front face. The tongue and/or mortis elements may for example be disposed so as to be spaced apart from the side ends of the block, so as
- 10 to be disposed adjacent one side end or so as to extend from one side end to the other side end; again it is to be borne in mind that the tongue and mortis elements of like blocks are to be configured so as to be able to interlock the blocks as described herein. The top face may have a
- 15 tongue element formed with convex end part and having a dihedral angle; the bottom face of the block may be formed with a complementary concave recesses also having a dihedral angle.
- 20 The tongue and mortis elements of a block may for example both be disposed adjacent the rear face thereof and each may longitudinally extend from one side end of the block to the other side end thereof. On the other hand, these interlock elements may be disposed at some other position
- 25 intermediate the rear and front faces if so desired; in this case however, it must be kept in mind that the top and bottom faces must be appropriately configured to facilitate the desired interlocking of like blocks.
- 30 Although like blocks are to be interlockable as mentioned above, a block in accordance with the present invention may nevertheless be provided with a mortise element which is sized and configured relative to the tongue element thereof so as to permit limited adjustment (i.e.
- 35 positional adjustment) of the block perpendicularly to the wall face when the block is initially disposed on a said underlying, like, block, i.e. by allowing for a minor



amount of clearance or play between the tongue and mortise nested therein, the play being rotational or linear about the tongue element.

5 A block may for example have a rear face which comprises an upper rear face element and a lower remaining rear face element. The upper rear face element is disposed adjacent the top face of the block and comprises a projection for
10 engaging a support means disposed opposite the rear face of the block. The lower remaining rear face element is forwardly inset relative to the projection of the upper rear face element. Such a configuration of the rear face may advantageously facilitate the above mentioned limited adjustment.

15 As mentioned above, a block in accordance with the present invention may have a top face provided with a declining drainage face portion. The drainage face portion is configured to have an overall slope such that when the
20 block is placed in a wall, water is able to flow down the drainage face without being trapped thereby. Thus in accordance with the present invention a block is provided wherein said ledge element and said top intermediate face element may be disposed such that the ledge element and
25 the top intermediate element define an obtuse angle therebetween and when said block and a said underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block, the ledge element may be able to be disposed such
30 the wall face and the ledge element define an acute angle therebetween and the top intermediate face element may be able to be disposed such the wall face and the top intermediate face element define an acute angle therebetween.

35 A block in accordance with the present invention may, if desired, include means for allowing the attachment of the



block to a support means disposed opposite the rear face thereof (e.g. to a furring). The means for allowing attachment of the block may comprise an aperture extending from said top intermediate face element to the rear face of the block. Such an aperture may be countersunk at the top intermediate side thereof. The aperture may thus be a straight opening for receiving an attachment means such as a nail or screw element for fixing the block to a support means such as a wall furring.

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The means for allowing attachment of a block to a support means may alternatively comprise a guide groove for facilitating the drilling of an aperture through the block from the top intermediate face element to the rear face of the block, said guide groove being disposed in the top intermediate face element and extending from one side end of the block to the other side end thereof.

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As mentioned above a block may be configured to cooperate with a like underlying block so as to form a drainage air gap. The drainage air gap may take on any desired form or shape keeping in mind that its purpose is to attenuate the infiltration of water between the block and a said underlying, like, block as well as to facilitate the drainage of water from therebetween (i.e. due to the sloped drainage face); the infiltration of water may, for example, be due to capillary action and/or the influence of wind acting on the wall face during a rain storm for example. Thus a block may be provided wherein the top and bottom intermediate face elements of the block may be configured such that, when said block and a said underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block, the bottom intermediate face element of the block and the top intermediate face element of a said underlying, like, block are able to define side walls of a drainage air gap of wedge-like shape. The

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wedge shaped gap may have a wide part and a lower narrow end, said wide part being disposed toward the interlocked tongue and mortise elements, said lower narrow end being disposed toward the engaging foot and ledge elements.

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The above blocks may be incorporated into a wall. The wall may for example be an exterior wall which is exposed to the atmosphere, e.g. rain and wind. The wall may if desired be an interior wall.

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Thus the present invention in a further aspect provides a wall wherein a plurality of like blocks are stacked in successive mortarless overlapping courses so as to define a wall face,

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each said block comprising

two side ends spaced apart by

a top face

a bottom face

a front face and

20

a rear face

said top face comprising a tongue interlock element and a declining face portion, said declining face portion connecting the tongue interlock element to the front face,

25

said bottom face comprising a mortise interlock element and a forward face portion, said forward face portion connecting the mortise interlock element to the front face,

30

said two side ends, said top face, said bottom face, said front face and said rear face being configured such that, when said block and an underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block such that the front face of the block defines a portion of the wall face,

35

the tongue interlock element of a said underlying



block is able to register in the mortise interlock element of the block so as to be able to interlock both blocks such that relative forward and rearward displacement is inhibited, and
5 the front face of the block is vertically offset downwardly relative to the tongue element thereof, and
wherein at least some of said blocks include means for allowing the attachment of such block to a support means
10 disposed opposite the rear face thereof and at least some of such blocks provided with means for the attachment thereof to said support means are attached to said support means by respective attachment means exploiting respective means for allowing attachment of the block to the support
15 mean.

The present invention also provides a wall wherein a plurality of like blocks are stacked in successive mortarless overlapping courses so as to define a wall
20 face,
each said block comprising
two side ends spaced apart by
a top face
a bottom face
25 a front face and
a rear face
said top face comprising a tongue interlock element and a declining face portion, said declining face portion comprising a ledge element and a top
30 intermediate element, said top intermediate element connecting the tongue interlock element to the ledge element, said ledge element connecting the top intermediate element to the front face,
said bottom face comprising a mortise interlock
35 element and a forward face portion, said forward face portion comprising a foot element and a bottom intermediate element, said bottom intermediate



element connecting the mortise interlock element to the foot element, said foot element connecting the bottom intermediate element to the front face,

5 said two side ends, said top face, said bottom face, said front face and said rear face being configured such that, when said block and an underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block such that the
10 front face of the block defines a portion of the wall face,

the tongue interlock element of a said underlying block is able to register in the mortise interlock element of the block so as to be able to interlock
15 both blocks such that relative forward and rearward displacement is inhibited,

the front face of the block is vertically offset downwardly relative to the tongue element thereof, the foot element of the forward face portion of the
20 block is able to engage the ledge element of the underlying, like, block

and

wherein at least some of said blocks include means for allowing the attachment of such block to a support means
25 disposed opposite the rear face thereof and at least some of such blocks provided with means for the attachment thereof to said support means are attached to said support means by respective attachment means exploiting respective means for allowing attachment of the block to the support
30 mean.

The present invention also in particular provides a wall wherein a plurality of like blocks are stacked in successive mortarless overlapping courses so as to define
35 a wall face thereof,
each said block comprising
two side ends spaced apart by



a top face
a bottom face
a front face and
a rear face

5 said top face comprising a tongue interlock element
and a declining drainage face portion, said
declining drainage face portion comprising a ledge
element and a top intermediate element, said top
10 intermediate element connecting the tongue interlock
element to the ledge element, said ledge element
connecting the top intermediate element to the front
face,
said bottom face comprising a mortise interlock
15 element and a forward face portion, said forward
face portion comprising a foot element and a bottom
intermediate element, said bottom intermediate
element connecting the mortise interlock element to
20 thont surface for receiving the rear faces of the
blocks as herein described. A wall furring means
may for example be a flat panel of wood affixed
(e.g. affixed to an underlying wall support
structure). Alternatively, said wall furring means
25 may be a plurality of horizontally extending,
vertically spaced rails or strips (of wood) to which
at least some of the blocks of a wall may be affixed
(by nails, screws, etc..). The furring strips for
example each having a front protruding surface, and
30 the rear side of each of the blocks may have a
longitudinal recess shaped to fit with and receive
the protruding surface of a corresponding one of the
rails. The strips of wood serve to space the blocks
away from the underlying support structure so as to
provide an air gap between the back of the blocks
and the underlying wall support structure.

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A wall may further comprise base units to provide a steady
bottom course, each of the base units having a bearing



surface adapted to steadily rest onto an accommodating structural member having a planar surface. The base units may have a top face provided with convex dihedral protrusions shaped to nest in a complementary mortise element. The base units may also have a pair of opposite lateral sides shaped to match lateral sides of the adjacent base units to form said bottom course.

The tongue element may comprise an inset seat portion for allowing attachment of the block to the support structure, the seat element being configured to engage a chevron-shaped bracket affixable to a rear support means. The rear face of the block may for example be provided with a longitudinal recess extending between the side ends thereof, the longitudinal recess being configured and sized to engage a lining rail affixed to the support means.

In accordance with a wall of the present invention adjacent blocks of each course of blocks may define a joint therebetween. The blocks may if desired be stacked directly on top of one another so as to form a plurality of horizontal columns of blocks, the joints between columns being more or less parallel. Alternatively the joints between blocks may take on a horizontal zig-zag pattern; such a pattern will facilitate the inhibition of water infiltration. Thus, in this latter case at least one course of blocks comprises blocks which engage a respective pair of adjacent underlying blocks in an underlying course of blocks and straddle the joint between said pair of adjacent underlying blocks. If desired, adjacent blocks of each course of blocks may define a joint therebetween and a respective block in an upper course of blocks straddles each such joint and engages the underlying adjacent blocks defining said respective joint. A straddling block may be disposed more over one block than another or it may be disposed in equal fashion over



the joint of the underlying pair of blocks, i.e. the blocks may be stacked in staggered fashion.

In drawings which illustrate example embodiments of the
5 invention,

Figure 1 shows a perspective view of an example
embodiment of a block in accordance with
the present invention, the block being
10 provided with a longitudinal guide groove
interrupting the top intermediate face
element thereof;

Figure 2 is a side end view of the block shown in
figure 1;

15 Figure 3 is a side end view of a parent block
comprising a pair of blocks as shown in
figure 1 joined at the front faces
thereof;

Figure 4 shows the separated pair of blocks
20 obtained from the parent block of figure 1
in interlocking relationship;

Figure 5 shows a front view of a block as seen in
figure 1 wherein the tongue element is
shown with an example manufacturing
25 deformation;

Figure 6 shows a front view of a block as seen in
figure 1 wherein the foot element is shown
with an example manufacturing deformation;



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- Figure 7 shows a side end view of a block as seen in figure 1 wherein the tongue and mortise elements are shown with an example manufacturing deformation;
- 5 Figure 8 shows an enlarged view of the interlocked blocks of figure 4;
- Figure 9 is an enlarged view of the interlocked tongue and mortise elements;
- Figure 10 is an enlarged view of the guide groove;
- 10 Figure 11 is an enlarged view of the engaging foot and ledge elements;
- Figure 12 illustrates a block in a straddling relationship with underlying blocks;
- Figure 13 is an illustration of a plurality of blocks in a staggered relationship;
- 15 Figure 14 illustrates a number of like blocks defining example embodiments of different drainage air gaps therebetween;
- Figure 15 illustrates a number of like blocks defining additional example embodiments of different drainage air gaps therebetween;
- 20 Figure 16 is a side end view of a further embodiment of a parent block comprising another pair of example blocks joined at the front faces thereof;
- 25 Figure 17 shows the separated pair of blocks obtained from the parent block of figure 16 in interlocking relationship;



- 5 Figure 18 shows a perspective view of an example embodiment of a modified version of the block shown in figure 1 wherein the guide groove has been replaced by two apertures passing from the top intermediate face element thereof to the rear face thereof;
- 10 Figure 19 shows a perspective view of a further example embodiment of a block in accordance with the present invention provided with an inset seat for engaging a bracket for attaching the block to a rear support means;
- 15 Figure 20 is a side view of an example embodiment of a bracket for attaching the block of figure 19 to a rear support means;
- 20 Figure 21 is a front view of the bracket of figure 20;
- 25 Figure 22 is a partial side view of a bracket of figure 20 shown in place between two blocks of figure 19;
- 30 Figure 23 shows a perspective view of a further embodiment of a block provided with a side end slot for attachment to a building structure using a nail, screw or the like;
- 35 Figure 24 shows a side elevation view of an example mortarless wall portion constructed using blocks as seen in figure 1 attached to a furring member;



Figure 25 shows a side elevation view of a further example mortarless wall portion constructed using blocks as seen in figure 1 attached to a furring member;

5 Figure 26 shows a side elevation view of another example mortarless wall portion constructed using blocks having a side configuration of the block of figure 19 but wherein the inset seat has been
10 replaced with apertures such as shown with respect to the block in figure 18;

Figure 27 shows a side elevation view of an additional example mortarless wall portion constructed using blocks as seen in figure
15 19 attached to a furring member;

Figure 28 shows a side elevation view of another example mortarless wall portion constructed using blocks as seen in figure
20 23 attached to a furring member as seen in figure 26;

Figure 29 shows a side elevation view of another example mortarless wall portion constructed using a further example embodiment of blocks attached to a furring
25 member as seen in figure 26;

Figure 30 shows a side elevation view of another example mortarless wall portion constructed using another example



embodiment of blocks attached to a furring member as seen in figure 26;

5 Figure 31 shows a side elevation view of yet another example mortarless wall portion constructed using yet another example embodiment of blocks attached to a furring member as seen in figure 26;

10 Figure 32 illustrates a partial front view of staggered blocks only some of which are attached to furring elements;

Figure 33 shows a perspective view of a corner brick for use in a masonry wall according to the present invention;

15 Figure 34 shows a perspective view of a finishing brick for use in a masonry wall according to the present invention;

Figure 35 shows a perspective view of another corner brick for use in a masonry wall according to the present invention.

20 Figure 36 shows a perspective view of another corner brick for use in a masonry wall according to the present invention.

25 Referring to figures 1 and 2 these figures illustrate an example embodiment of a block in accordance with the present invention. The block 1 has two side ends 2 and 3. The block 1 has, when viewed in the direction of the arrow 4, a top face designated by the reference numeral 5. The



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block 1 has, when viewed in the direction of the arrow 6, a bottom face designated by the reference numeral 7. The block 1 has, when viewed in the direction of the arrow 8, a front face designated by the reference numeral 9. Finally, the block 1 has, when viewed in the direction of the arrow 10, a rear face designated by the reference numeral 11. The side ends 2 and 3 are spaced apart by the top face 5, the bottom face 7, the front face 9 and the rear face 11.

10

The top face 5 comprises a tongue interlock element 15 as well as a declining drainage face portion which comprises ledge element 17 and top intermediate face element 18.

15 The bottom face 7 comprises mortise interlock element 20 as well as a forward face portion which comprises foot element 22 and bottom intermediate face element 23.

20 A reference line 25 designates the plane of the wall face of a wall in which the block 1 may be incorporated. As may be appreciated the front face 9 would define a portion of such wall face. As may be seen the ledge element 17 and the top intermediate face element 18 define an obtuse angel 30 with the plane of the wall face; on the other hand the ledge element 17 and the top intermediate face element 18 each define a respective acute angle 31 and 32 with the plane of the wall face. As shown the wall face would be more or less vertical straight up. The wall face



if desired may however not be vertically straight up; in this case care would have to be taken to insure that the angles between the various elements of the declining face portion are such as to permit water to nevertheless run
5 down the declining face portion to facilitate water drainage.

The rear face 11 comprises an upper rear face element 35 and a lower remaining rear face element 36. The upper
10 face element 35 comprises a projection 37 which vertically extends across the entire upper face element 35. If desired the projection 37 may vertically extend over a smaller part of the upper face element keeping in mind that the projection 37 is intended to abut a furring
15 member as seen in figures 24 and 25. The remaining rear face element 36 is forwardly inset in the direction of the
~~arrow 10 as may be seen from figure 9.~~

The block 1 includes a guide groove 40 which extends from
20 on side end to the other. The guide groove 40 is present to facilitate the drilling of apertures in the body of the block 11 in the direction of the arrow 41. These apertures may be used to secure the block to a rear support member such as a furring by means of a nail or
25 screw.

As may be seen the tongue element 15 and the mortise element 20 are both disposed adjacent the rear face 11 and



extend longitudinally from side end 2 to side end 3. The tongue element may if desired not extend from one side end to the other; e.g. a shortened tongue element may be bracketed between planar face portions level with the edge
5 of the rear face. Alternatively, the mortise may not be an open ended groove as shown but may be closed off at its ends; in this case the tongue would of course have to be appropriately configured so as to be able to nest therein so as to interlock the blocks. The tongue element 15
10 includes a dihedral angle 45; the mortise element 20 includes a dihedral angle 46.

The rear projection 37 and the remaining rear face element 36 likewise extend from one side end to the other. The
15 remaining rear face element 36 includes a groove 42 which may be exploited to fix the block to a support means in a manner analogous as shown for example in figure 26.

As may be seen from figure 2, the front face 9 is
20 vertically offset downwardly relative to the tongue element 15, i.e. in this case the tongue element 15 is vertically higher than the front face 9.

The front face 9 has upper and lower bevelled edges 50 and
25 51, to look like a conventional block or brick. The block may have any suitable length, height and width. The dimensions of the block 1 depend on the available moulding process and the bearing capacity of the building



foundation. A width, between the front and rear faces that is suitable for example for an outside wall of masonry construction, is approximately equal to 83 mm. Considering the block 1 having a total height P and a frontal height H, then for example $P \geq 1.2H$ and in particular $P = 2H$.

As mentioned above the block 1 may conveniently be formed by concrete, clay, resin, or any other mouldable material. Referring to figure 3, the block 1 may be obtained by breaking a parent block 60 along a cleavage line 61 defined by upper and lower cleavage grooves 62 and 63.

Referring to figure 4, this figure illustrates the two blocks 1, obtained from the parent block 60, in interlocking relationship such that relative forward movement or displacement in the direction of the arrow 10 and relative rearward movement in the direction of the arrow 8 is inhibited. However it is to be noted that for the configuration of the block 1 if only the two blocks 1 are considered by themselves as shown there is no relative lateral interlocking; for a wall such lateral locking is achieved by fixing at least some of the blocks in place by attaching them to a rear support means.

As may be seen from figure 4, with one block 1 disposed over a like block 1, the bottom intermediate face element 23 of the upper block and the top intermediate face



element 18 of the lower or underlying block define the side walls of a drainage air gap 66 disposed between the upper and lower blocks 1. The gap 66 has wide part 68 dispose toward the interlocked tongue and mortise elements; the gap 66 also has a lower part 69 disposed towards the engaging foot and ledge elements. The dimensions of the air gap 66 may vary keeping in mind its purpose, e.g. inhibit infiltration of water by capillarity behind the wall.

10

Referring to figures 5, 6 and 7, these figures illustrate possible deformations of the block from the true or perfect shape thereof; the deviations are designated by the reference numerals 70, 71, 72 and 74.

15

Referring to figure 8, 9, 10, and 11 these figures show in more detail certain aspects of the interlocked the blocks 1. Although as mentioned above the blocks 1 are interlocked so as to inhibit movement thereof, certain of the block elements may be sized so as to provide a limited clearance so as to give the blocks some limited play for adjusting the relative dispositions of the blocks to attenuate the aforementioned deformities, i.e. for avoiding uneven stacking caused by small deformations due to manufacturing thereof. The possible clearances are designated by the reference numerals 75, 76 and 77 in figures 9 and 11; the clearance may thus allow for some minor linear movement in the direction of the arrow 80



and/or some minor rotational movement in the direction of the arrow 81 i.e. rotation for example about point 82. As may be seen from figure 11 the foot element does not engage the underlying ledge element over its entire face , i.e. at the front part there is a clearance 85. Also as
5 may be seen from figure 9 the lower remaining rear face element of the rear face is inset forwardly relative to the projection 37 an amount indicated generally by the reference numeral 88.

10

Figures 12 and 13 generally illustrate how courses of blocks such as block 1 may be stacked in staggered fashion; as seen in figure 12 the central block 89 is disposed equally on both sides of the joint 90. It is to
15 be understood, however that the benefit of the zig-zag joints may also be obtained if the block 89 is displaced to one side such that it is no longer disposed equally about the joint 90, i.e. as long as the joint 90 is covered water infiltration along the vertical joints may
20 be advantageously inhibited relative to the case where the vertical joints extend vertically in a straight line between columns of blocks.

Referring to figures 8 and 12 an upper block 1 may bear on
25 the underlying block 1 at both the tongue element and the ledge element or if desired, provided that adequate interlocking is achieved, substantial only on the ledge element.



In accordance with the present invention the expression "like blocks" include blocks which while not exactly identical are nevertheless able to interlock as described herein and as the case may be have top and bottom intermediate face elements which are able to define a discharge gap therebetween. Referring to figures 14 and 15 the figures show blocks 1 being interlocked with like blocks 95, 96, 97 and 98 and 99. The like blocks 95, 96 98 and 99 have projections on the intermediate faces elements thereof which may be considered to divide the respective air gap into a number of communicating decompression chambers for accentuating the attenuation of water infiltration due for example to wind action in the presence of rain. These projections all have sloping upper surfaces 102, 103, 104, 105, 106 and 107 such that the projections do in trap water.

although the air gap has been shown in the drawing to be of more or less wedge-like shape the air gap may take on any other desired shape provided that it is still a drainage air gap. Turning to figures 16 and 17, these figures show an additional alternate block configuration and a consequential different air gap configuration; the air gap being designated by the reference numeral 110. The parent block 112 is cleavable in the same manner as the parent block 60 along a cleavage line 115 to form two blocks 117. The blocks 117 are of the same configuration as block 1 except for the configuration of the bottom



intermediate face element 120.

Figure 18 also shows an alternate block configuration. The block 122 is the same as block 1 except that block 122
5 does not have the guide groove 40. In place of the guide groove 40 the block 122 has two apertures 127 and 128 which extend from the top intermediate face element to the rear face 11. The apertures may be countersunk to seat the head of a screw for example as indicated by the dotted
10 circle 129.

Referring to figure 19, a further example embodiment of a block is illustrated. The block 130 is the same as the block 1 except for number of features. the block 130 does
15 not have a guide groove 40; instead the block 130 is provided with an inset seat 133 for engaging a bracket for fixing the block to a rear support means. Additionally the top intermediate face element 135 is recessed relative to the top intermediate faced element 18 of block 1.
20 Finally the bottom intermediate face element 136 is not recessed as is the case for the bottom intermediate face element 23. Referring to figure 26 the like blocks 130 are able to define air gaps 138 of wedge like shape.

25 Referring to figures 20, 21 and 22 these figures illustrate an example bracket 140 having a portion 141 configured for engaging the inset seat 133 of block 130. The bracket also has a portion 142 for engaging a fastener



such as a screw for attaching the bracket for example to a wall furring means. The portion 142 is provided with an opening indicated by the reference numeral 144 for receiving a screw (not shown) in the direction of the
5 arrow 145; the space 146 is sized relative to the screw head such that the screw head does not engage the upper block 130.

Referring to Figure 23, there is shown a modified
10 embodiment of the block 130 shown in figure 19. The block 145 instead of having the inset seat 133 has slot groove 147 for receiving a nail or screw for example. the top intermediate face element 150 is provided with projection elements 152 and 153.

15

Referring to figure 24 this figure shows a portion of mortarless wall structure using the block 1. A screw 154 is used to attach one block 1 to a horizontal wall furring element 155.

20

Referring to figure 25, this figure show a portion of another mortarless wall structure wherein one of the blocks is also attached to a wall furring 156 by a screw 157. The block are supported by a base member 158 which
25 is configured to supportingly engage the first row of blocks; the base member 158 is maintained in place by screws (not shown).



Referring to figure 26, there is shown a portion of a mortarless wall structure. The structure includes a wall furring means comprising a plurality of horizontally extending, vertically spaced rails 160 each affixed to an underlying wall member 160a having a front protruding member 164, and the rear face of the blocks 165 which are a variant on the blocks 130 have a groove 42 shaped to fit with and receive the protruding member 164 of a corresponding one of the rails 160. The rails space the rear of the blocks away from the underlying wall member so as to provide an air space therebetween. The rails may be made of metal or wood or any other suitable material.

The mortarless wall structure shown in figure 26 further comprises base units 166 having a base rear part 167 engaging a support base and a front part 168 configured to engage the bottom face of an overlying block 165.

Referring to figures 28, 29, 30 and 31 these each show a wall structure analogous to that seen in figure 26 except that different block structures are used. Figure 28 shows a wall structure using the block 145 of figure 23. Figure 29 shows a block 170 wherein the foot element 171 does not engage a lower ledge element of an underlying block 170. Figure 30 shows a block 175 which has a counter sink for the head 176 of a screw but does not form an air gap between top and bottom intermediate face elements. Figure 31 shows a block 180 which has a counter sink for the head



176 of a screw but does not form an air gap between top and bottom intermediate face elements and does not have foot and ledge elements.

5 Referring to figure 27 this figure shows a portion of a mortarless wall structure wherein the block are blocks 130 of figure 19 and one of the blocks 130 is shown as being held in place against a furring 185 by a bracket 140 by means of a screw 186. The first row of blocks 130 is
10 supported on base elements 187 which are configured to engage the bottom face of block 130. The base elements 187 are in turn supported by a base member fixed to the furring 185.

15 Figure 32 shows a front view of a portion of a mortarless wall structure wherein only some of the blocks are attached to wall furrings 190 by attachment means represents by a small circle one of which is designated by the numeral 192. The underlying base support members 194
20 are all attached to an underlying wall member.

As shown on Figures 33, 34, 35 and 36, the mortarless masonry wall may further comprise finishing units for corners (Figures 5, 7 and 8) and windows (Figure 6), each being shaped to match with the block 130 (as shown in
25 Figures 19) while providing the required shape to form the corners and windows.





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We claim:

1. A block, for use in the construction of a wall
wherein a plurality of like blocks are stacked in
successive mortarless overlapping courses so as to define
5 a wall face,

said block comprising

two side ends spaced apart by

a top face

a bottom face

10 a front face and

a rear face

said top face comprising a tongue interlock element
and a declining drainage face portion, said
15 declining drainage face portion comprising a ledge
element and a top intermediate face element, said
top intermediate face element connecting the tongue
interlock element to the ledge element, said ledge
element connecting the top intermediate face element
20 to the front face,

said bottom face comprising a mortise interlock
element and a forward face portion, said forward
face portion comprising a foot element and a bottom
intermediate face element, said bottom intermediate
25 face element connecting the mortise interlock
element to the foot element, said foot element
connecting the bottom intermediate face element to
the front face,



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said two side ends, said top face, said bottom face, said front face and said rear face being configured such that, when said block and an underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block such that the front face of the block defines a portion of the wall face,

the tongue interlock element of a said underlying block is able to register in the mortise interlock element of the block so as to be able to interlock both blocks such that relative forward and rearward displacement is inhibited,

the front face of the block is vertically offset downwardly relative to the tongue element thereof, the foot element of the forward face portion of the block is able to engage the ledge element of a said underlying, like, block, and

the bottom intermediate face element of the block and the top intermediate face element of a said underlying, like, block are spaced apart and able to define side walls of a drainage air gap therebetween.

2. A block as defined in claim 1 wherein the top and bottom intermediate face elements of the block are configured such that, when said block and a said underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said





- underlying, like, block, the bottom intermediate face element of the block and the top intermediate face element of a said underlying, like, block are able to define side walls of a drainage air gap of wedge-like shape, said
- 5 wedge shaped gap having a wide part and a lower narrow end, said wide part being disposed toward the interlocked tongue and mortise elements, said lower narrow end being disposed toward the engaging foot and ledge elements.
- 10 3. A block as defined in claim 1 wherein the tongue and mortise elements of the block are disposed adjacent the rear face thereof and each longitudinally extend from one side end of the block to the other side end thereof.
- 15 4. A block as defined in claim 1 wherein the mortise element of the block is sized and configured relative to the tongue element thereof so as to permit limited adjustment of the block perpendicularly to the wall face when the block is initially disposed on a said underlying,
- 20 like, block.
5. A block as defined in claim 1 wherein said ledge element and said top intermediate face element are disposed such that the ledge element and the top
- 25 intermediate element define an obtuse angle therebetween and when said block and a said underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block,



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the ledge element is able to be disposed such the wall face and the ledge element define an acute angle therebetween and the top intermediate face element is able to be disposed such the wall face and the top intermediate
5 face element define an acute angle therebetween.

6. A block as defined in claim 1 wherein said block includes means for allowing the attachment of the block to a support means disposed opposite the rear face thereof.

10

7. A block as defined in claim 6, wherein the means for allowing attachment of the block comprises an aperture extending from said top intermediate face element to the rear face of the block.

15

8. A block as defined in claim 7 wherein the aperture is countersunk at the top intermediate side thereof.

9. A block as defined in claim 6, wherein the tongue
20 element comprises an inset seat portion for allowing attachment of the block to the support structure, the seat element being configured to engage a chevron-shaped bracket affixable to the support means.

25 10. A block as defined in claim 1, wherein the rear face of the block has a longitudinal recess extending between the side ends thereof, the longitudinal recess being configured and sized to engage a lining rail affixed to





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the support means.

11. A block as defined in claim 4 wherein the rear face
comprises an upper rear face element and a lower remaining
5 rear face element, said upper rear face element being
disposed adjacent the top face of the block, said upper
face element comprising a projection for engaging a
support means disposed opposite the rear face of the
block, said lower remaining rear face element being
10 forwardly inset relative to the projection of the upper
rear face element.

12. A block as defined in claim 6 wherein the means for
allowing attachment of the block comprises a guide groove
15 for facilitating the drilling of an aperture through the
block from said top intermediate face element to the rear
face of the block, said guide groove being disposed in the
top intermediate face element and extending from one side
end of the block to the other side end thereof.

20 13. A wall wherein a plurality of like blocks are stacked
in successive mortarless overlapping courses so as to
define a wall face thereof,
each said block comprising

25 two side ends spaced apart by
a top face
a bottom face
a front face and





a rear face

5 said top face comprising a tongue interlock element
and a declining drainage face portion, said
declining drainage face portion comprising a ledge
element and a top intermediate element, said top
intermediate element connecting the tongue interlock
element to the ledge element, said ledge element
connecting the top intermediate element to the front
face,

10 said bottom face comprising a mortise interlock
element and a forward face portion, said forward
face portion comprising a foot element and a bottom
intermediate element, said bottom intermediate
element connecting the mortise interlock element to
15 the foot element, said foot element connecting the
bottom intermediate element to the front face,

said two side ends, said top face, said bottom face, said
front face and said rear face being configured such that,
20 when said block and an underlying, like, block form part
of the wall and the bottom face of the block engages the
top face of a said underlying, like, block such that the
front face of the block defines a portion of the wall
face,

25 the tongue interlock element of a said underlying
block is able register in the mortise interlock
element of the block so as to be able to interlock
both blocks such that relative forward and rearward





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displacement is inhibited,
the front face of the block is vertically offset
downwardly relative to the tongue element thereof,
the foot element of the forward face portion of the
5 block is able to engage the ledge element of a said
underlying, like, block, and
the bottom intermediate element of the block and the
top intermediate element of a said underlying, like,
block are spaced apart and able to define side walls
10 of a drainage air gap therebetween,
and
wherein at least some of said blocks include means for
allowing the attachment of such blocks to a support means
disposed opposite the rear face thereof and at least some
15 of such blocks provided with means for allowing attachment
thereof to said support means are attached to said support
means by respective attachment means exploiting respective
means for allowing attachment of such blocks to the
support means.

20

14. A wall as defined in claim 13 wherein adjacent blocks
of each course of blocks define a joint therebetween and
a respective block in an upper course of blocks straddles
each such joint and engages the underlying adjacent blocks
25 defining said respective joint.

15. A wall as defined in claim 13 wherein the top and
bottom intermediate face elements of said blocks are





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configured such that the bottom intermediate face element of a said block and the top intermediate face element of a said underlying, like, block define side walls of a drainage air gap of wedge-like shape, said wedge shaped gap having a wide part and a lower narrow end, said wide part being disposed toward the interlocked tongue and mortise elements, said lower narrow end being disposed toward the engaging foot and ledge elements.

10 16. A wall as defined in claim 13 wherein the said tongue and mortise elements of each of said blocks are respectively disposed adjacent the rear face thereof and each longitudinally extend from one side end of a said block to the other side end thereof.

15 17. A wall as defined in claim 13 wherein the mortise element of each of said blocks is sized and configured relative to the respective tongue element thereof so as to permit limited adjustment of a said block perpendicularly to the wall face when a said block is initially disposed on a said underlying, like, block.

20 18. A wall as defined in claim 13 wherein for each of said blocks said ledge element and said top intermediate face element are disposed such that the ledge element and the top intermediate element define an obtuse angle therebetween, the ledge element is disposed such the wall face and the ledge element define an acute angle



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therebetween and the top intermediate face element is disposed such the wall face and the top intermediate face element define an acute angle therebetween.

- 5 19. A wall as defined in claim 13, wherein the means for allowing attachment of such a block comprises an aperture extending from said top intermediate face element to the rear face of such block.
- 10 20. A wall as defined in claim 19 wherein the aperture is countersunk at the top intermediate side thereof.
- 15 21. A wall as defined in claim 13, wherein the tongue element of a block comprising means for allowing the attachment of such block to said support means, comprises an inset seat portion for allowing attachment of such a block to the support structure, the seat element being configured to engage a chevron-shaped bracket affixed to the support means.
- 20 22. A wall as defined in claim 13, wherein the rear faces of said blocks has a longitudinal recess extending between the side ends thereof, the longitudinal recess being configured and sized to engage a lining rail affixed to
- 25 the support means.
23. A wall as defined in claim 17 wherein for each of said blocks the rear face comprises an upper rear face





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element and a remaining rear face element, said upper rear face element being disposed adjacent the top face of the block, said upper face element comprising a projection for engaging a support means disposed opposite the rear face
5 of the block, said remaining rear face element being forwardly inset relative to the projection of the upper rear face element.

24. A wall wherein a plurality of like blocks are stacked
10 in successive mortarless overlapping courses so as to define a wall face,
each said block comprising

two side ends spaced apart by

a top face
15 a bottom face
a front face and
a rear face

said top face comprising a tongue interlock element and a declining face portion, said declining face
20 portion comprising a ledge element and a top intermediate element, said top intermediate element connecting the tongue interlock element to the ledge element, said ledge element connecting the top intermediate element to the front face,

25 said bottom face comprising a mortise interlock element and a forward face portion, said forward face portion comprising a foot element and a bottom intermediate element, said bottom intermediate





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element connecting the mortise interlock element to the foot element, said foot element connecting the bottom intermediate element to the front face,

5 said two side ends, said top face, said bottom face, said front face and said rear face being configured such that, when said block and an underlying, like, block form part of the wall and the bottom face of the block engages the top face of a said underlying, like, block such that the
10 front face of the block defines a portion of the wall face,

the tongue interlock element of a said underlying block is able to register in the mortise interlock element of the block so as to be able to interlock
15 both blocks such that relative forward and rearward displacement is inhibited,

the front face of the block is vertically offset downwardly relative to the tongue element thereof, the foot element of the forward face portion of the
20 block is able to engage the ledge element of the underlying, like, block

and

wherein at least some of said blocks include means for allowing the attachment of such block to a support means
25 disposed opposite the rear face thereof and at least some of such blocks provided with means for the attachment thereof to said support means are attached to said support means by respective attachment means exploiting respective





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means for allowing attachment of the block to the support means.

25. A wall as defined in claim 24 wherein adjacent blocks
5 of each course of blocks define a joint therebetween and
a respective block in an upper course of blocks straddles
each such joint and engages the underlying adjacent blocks
defining said respective joint.

10 26. A wall as defined in claim 24 wherein the said tongue
and mortise elements of each of said blocks are disposed
adjacent the rear face thereof and longitudinally extend
from one side end of a said block to the other side end
thereof.

15 27. A wall as defined in claim 24 wherein the mortise
element of each of said blocks is sized and configured
relative to the respective tongue element thereof so as to
permit limited adjustment of a said block perpendicularly
20 to the wall face when a said block is initially disposed
on a said underlying, like, block.

25 28. A wall as defined in claim 24 wherein for each of
said blocks said ledge element and said top intermediate
face element are disposed such that the ledge element and
the top intermediate element define an obtuse angle
therebetween, the ledge element is disposed such the wall
face and the ledge element define an acute angle





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therebetween and the top intermediate face element is disposed such the wall face and the top intermediate face element define an acute angle therebetween.

5 29. A wall as defined in claim 24, wherein the means for allowing attachment of such a block comprises an aperture extending from said top intermediate face element to the rear face of such block.

10 30. A wall as defined in claim 29 wherein the aperture is countersunk at the top intermediate side thereof.

15 31. A wall as defined in claim 24, wherein the tongue element of a block comprising means for allowing the attachment of such block to said support means, comprises an inset seat portion for allowing attachment of such a block to the support structure, the seat element being configured to engage a chevron-shaped bracket affixable to the support means.

20 32. A wall as defined in claim 24, wherein the rear faces of said blocks has a longitudinal recess extending between the side ends thereof, the longitudinal recess being configured and sized to engage a lining rail affixed to
25 the support means.

33. A wall as defined in claim 27 wherein for each of said blocks the rear face comprises an upper rear face



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element and a remaining rear face element, said upper rear
face element being disposed adjacent the top face of the
block, said upper face element comprising a projection for
engaging a support means disposed opposite the rear face
5 of the block, said remaining rear face element being inset
relative to the projection of the upper rear face element.

34. A block, for use in the construction of a wall
wherein a plurality of like blocks are stacked in
10 successive mortarless overlapping courses so as to define
a wall face,
said block comprising

two side ends spaced apart by
a top face
15 a bottom face
a front face and
a rear face

said top face comprising a tongue interlock element
20 and a declining drainage face portion, said drainage
face portion connecting the tongue interlock
element to the front face,
said bottom face comprising a mortise interlock
element and a forward face portion, said forward
25 face portion connecting the mortise interlock
element to the front face,

said two side ends, said top face, said bottom face, said



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front face and said rear face being configured such that,
when said block and an underlying, like, block form part
of the wall and the bottom face of the block engages the
top face of a said underlying, like, block such that the
5 front face of the block defines a portion of the wall
face,

the tongue interlock element of a said underlying
block is able to register in the mortise interlock
element of the block so as to be able to interlock
10 both blocks such that relative forward and rearward
displacement is inhibited,

the front face of the block is vertically offset
downwardly relative to the tongue element thereof,

and

15 the forward face portion of the bottom face of the
block and the drainage face portion of the top face
of said underlying, like, block are spaced apart and
able to define side walls of a drainage air gap
therebetween.

20

35. A wall wherein a plurality of like blocks are stacked
in successive mortarless overlapping courses so as to
define a wall face,
each said block comprising

25

two side ends spaced apart by
a top face
a bottom face
a front face and





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a rear face

5 said top face comprising a tongue interlock element
and a declining face portion, said declining face
portion connecting the tongue interlock element to
the front face,

said bottom face comprising a mortise interlock
element and a forward face portion, said forward
face portion connecting the mortise interlock
element to the front face,

10

said two side ends, said top face, said bottom face, said
front face and said rear face being configured such that,
when said block and an underlying, like, block form part
of the wall and the bottom face of the block engages the
15 top face of a said underlying, like, block such that the
front face of the block defines a portion of the wall
face,

the tongue interlock element of a said underlying
block is able to register in the mortise interlock
20 element of the block so as to be able to interlock
both blocks such that relative forward and rearward
displacement is inhibited, and
the front face of the block is vertically offset
downwardly relative to the tongue element thereof,

25 and

wherein at least some of said blocks include means for
allowing the attachment of such block to a support means
disposed opposite the rear face thereof and at least some





of such blocks provided with means for the attachment thereof to said support means are attached to said support means by respective attachment means exploiting respective means for allowing attachment of the block to the support means.

36. A wall as defined in claim 35 wherein adjacent blocks of each course of blocks define a joint therebetween and at least one course of blocks comprises blocks which engage a respective pair of adjacent underlying blocks in an underlying course of blocks and straddle the joint between said pair of adjacent underlying blocks.

37. A wall as defined in claim 35 wherein the said tongue and mortise elements of each of said blocks are disposed adjacent the rear face thereof and longitudinally extend from one side end of a said block to the other side end thereof.

38. A wall as defined in claim 35 wherein the mortise element of each of said blocks is sized and configured relative to the respective tongue element thereof so as to permit limited adjustment of a said block perpendicularly to the wall face when a said block is initially disposed on a said underlying, like, block.

39. A wall as defined in claim 35 wherein for each of said blocks said ledge element and said top intermediate





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face element are disposed such that the ledge element and the top intermediate element define an obtuse angle therebetween, the ledge element is disposed such the wall face and the ledge element define an acute angle
5 therebetween and the top intermediate face element is disposed such the wall face and the top intermediate face element define an acute angle therebetween.

40. A wall as defined in claim 35, wherein the means for
10 allowing attachment of such a block comprises an aperture extending from said top intermediate face element to the rear face of such block.

41. A wall as defined in claim 40 wherein the aperture is
15 countersunk at the top intermediate side thereof.

42. A wall as defined in claim 35, wherein the tongue element of a block comprising means for allowing the attachment of such block to said support means, comprises
20 an inset seat portion for allowing attachment of such a block to the support structure, the seat element being configured to engage a chevron-shaped bracket affixable to the support means.

43. A wall as defined in claim 35, wherein the rear faces of said blocks has a longitudinal recess extending between the side ends thereof, the longitudinal recess being configured and sized to engage a lining rail affixed to





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the support means.

44. A wall as defined in claim 38 wherein for each of
said blocks the rear face comprises an upper rear face
5 element and a remaining rear face element, said upper rear
face element being disposed adjacent the top face of the
block, said upper face element comprising a projection for
engaging a support means disposed opposite the rear face
of the block, said remaining rear face element being inset
10 relative to the projection of the upper rear face element.

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