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(54) **Antislip brick particularly suitable for antiseismic constructions**

(57) The invention is a new antislip brick (L) particularly suitable for antiseismic constructions, which is generically V-shaped, that is, has the upper (Ls) and lower part (Li) constituted by two surfaces (Ls1, Ls2; Li1, Li2) inclined with respect to each other to form a convex shape on one side and a concave shape on the opposite side, in such a way as to be constrained to and constrain the adjacent bricks (L) and the bricks (L) of the overlying

and underlying courses. The separation line between the various overlapping courses is not straight, but segmented, and consequently each brick (L) resists horizontal displacement, which is not possible with traditional bricks: in fact, the inclined surfaces prevent any displacement between upper and lower courses. A brick (La) having a plane part (L0) and an inclined part (L1) allows the construction of the corners of the building.

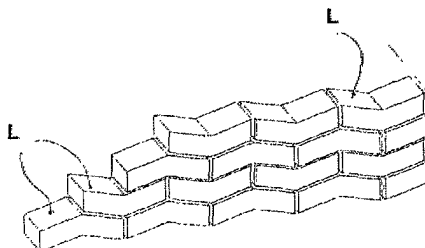


Figura 4

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Description

[0001] The present invention concerns the field of building construction and in particular it concerns the elements used for masonry works.

[0002] Since ancient times buildings have always been constructed with bricks made of baked clay or other parallelepiped-shaped elements joined with mortar. Said bricks are a favourite choice because, besides being easy to handle, they make it possible to build walls and structures with different dimensions.

[0003] Said bricks and said building elements, hereinafter referred to only as bricks, are laid in overlapping rows, which are commonly called courses.

[0004] According to the width of the walls to be built, special brick layouts in different courses are known and applied, in such a way as to obtain a horizontal connection and optimize the static characteristics of the wall, so that the final structure is not constituted by just a series of overlapping elements positioned side by side (separation on vertical planes).

[0005] According to the configuration of the bricks, each course is joined to the overlying and underlying courses with mortar.

[0006] In case of earthquake, the vertical stresses are absorbed by the courses of overlapping bricks, while the horizontal stresses may cause the separation and displacement of the bricks on one another, with consequent collapses and serious damage (cracks).

[0007] The object of the present invention is a new, antislip brick, particularly suitable for use in antiseismic buildings and on particular types of ground.

[0008] The main aim of the new brick, when laid, is to prevent the separation and horizontal displacement of the brick courses on each other.

[0009] Another aim of the new brick is to ensure rapid and easy laying.

[0010] The aims mentioned above and other direct and complementary aims have been achieved through the implementation of a new, generically V-shaped brick, that is, a brick having the upper and lower part constituted by two surfaces inclined with respect to each other to form a convex shape on one side and a concave shape on the opposite side, in such a way as to be constrained to and constrain the adjacent bricks and the bricks of the overlying and underlying courses.

[0011] A brick having a plane and an inclined part allows the construction of the corners of the building.

[0012] The characteristics of the new brick will be better explained by the following description, with reference to the drawings enclosed as an example without limitation.

[0013] Figure 1 is an axonometric view of the new brick (L).

[0014] The new brick (L), made of clay, concrete or other suitable material, is generically V-shaped, which means that seen from beside it is constituted by two symmetric parallelograms with a short side in common.

[0015] This shape requires that either the upper and the lower part of the new brick (L) are constituted by two surfaces (Ls1, Ls2) and (Li1, Li2) forming an angle. Consequently, the part of the new brick (L) that in the figure corresponds to the upper side (Ls) is convex, while the part of the new brick (L) that corresponds to the lower side (Li) is concave. Furthermore, the lower surface of the new brick (L) has the same configuration as the upper surface, so that they are parallel to each other and the angle (α) between the lower surface (Li) and the side surface (Lt) is not a right angle. The laying of the new brick (L) requires very little attention to the laying direction in relation to the bricks (L) that have already been laid.

[0016] Figure 4 shows the layout of the new bricks (L): a course comprises bricks (L) having their concave part facing downwards, while the overlying course comprises bricks (L) having their concave part facing upwards.

[0017] The bricks (L) of the various courses are overlapped in such a way as to obtain overlapping courses, wherein each course comprises bricks (L) positioned upside down and staggered with respect to the overlying and/or underlying course. In this way each lower concave part of each brick (L) rests on two halves of the lower parts of two adjacent bricks (L) of the underlying course, while the upper convex part of each brick (L) is in contact with two halves of the upper convex parts of two adjacent bricks (L) of the overlying course.

[0018] Figure 2 shows the angle (La) formed by an horizontal part (L0) and an inclined part (L1) with the same angle (α) as the element described above. In this case the angle between the side surface (Lt) and the lower surface (Li1) is equal to (α), while the angle (β) between the side surface (Lt) and the lower surface (Li0) is a right angle.

[0019] Figures 3 and 5 are a front and an axonometric view, respectively, of the angles (La) that join the courses of two walls orthogonal to each other.

[0020] The layout of the new bricks (L, La) creates a separation line between the various, overlapping courses: this line is not straight, but segmented.

[0021] Consequently, each brick (L) resists horizontal displacement, which is not possible with traditional bricks: in fact, the inclined surfaces prevent any displacement between upper and lower courses.

[0022] The new, antislip brick (L) constituted as described above, offers considerable advantages:

- it does not allow the displacement of a course or even of a single brick (L) between the courses;
- it does not require any special arrangement to guarantee that the courses will be displaced;
- it requires no specific laying direction, but can be laid in any direction;
- no special mould is required to manufacture it.

[0023] The new antislip brick can be shaped, dimensioned and if necessary provided with holes, in such a

way as to offer a valid alternative to double bricks, super double bricks, blocks, hollow blocks, elements for partition walls, etc.

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Claims

1. Brick, **characterized in that** it is generically V-shaped, that is, its upper part (Ls) and lower part (Li) are each constituted by two surfaces (Ls1, Ls2) and (Li1, Li2) that are inclined with respect to each other, in such a way as to obtain a convex shape on one side (Ls) and a concave shape (Li) on the opposite side.

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2. Brick according to claim 1, **characterized in that** the angle (α) between the lower surface (Li) and the side surface (Lt) is not a right angle, and wherein all the opposite surfaces are parallel to each other.

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3. Angle brick according to claim 1, **characterized in that** it is formed by a horizontal part (L0) and an inclined part (L1), and wherein the horizontal part has a right angle (β) formed by the lower surface (Li0) and the side surface (Lt), while the inclined part (L1) has the angle (α) between the lower surface (Li) and the side surface (Lt) according to claim 2, and wherein all the opposite surfaces are parallel to each other.

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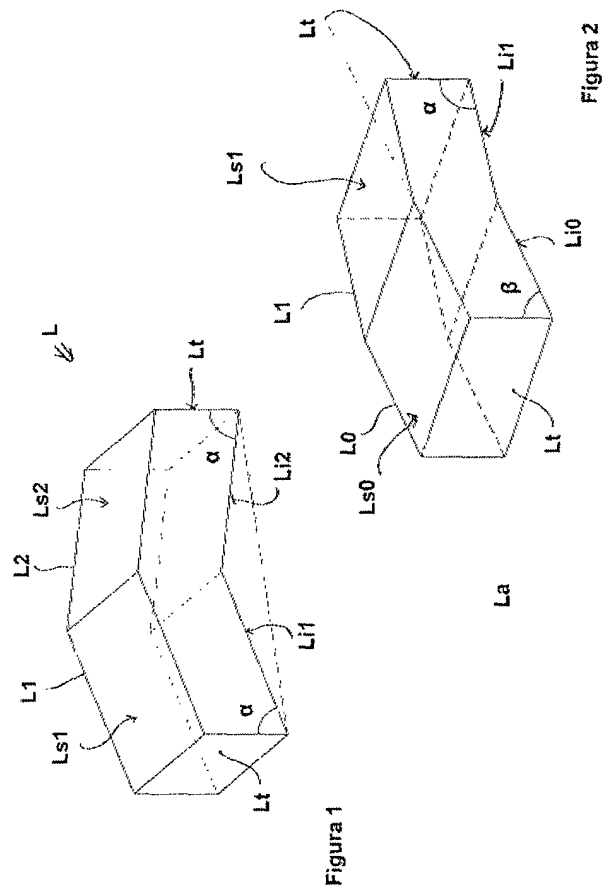
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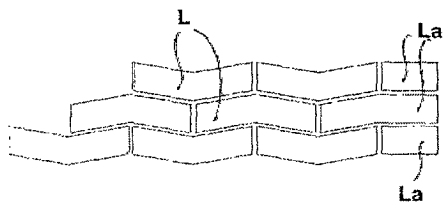


Figura 3

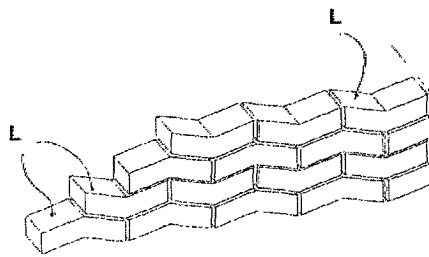


Figura 4

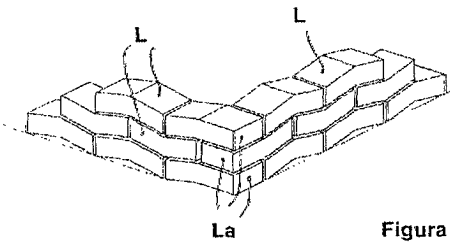


Figura 5



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EUROPEAN SEARCH REPORT

Application Number
EP 02 01 5438

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 181 230 A (CRIGHTON ET AL.) 14 May 1986 (1986-05-14) * column 2, line 50 - column 4, line 27; figures 3,9-13 *	1-3	E04B2/12 E04C1/39
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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			E04B E04C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12 November 2002	Examiner Mysliwetz, W
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 02 01 5438

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12-11-2002

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