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(54) **Brick with upright edge, and method and brickwork effected therewith**

(57) The invention relates to a brick, brickwork effected therewith and a method suitable thereto. The brick comprises an upstanding edge, which extends along a side surface of the brick. The upstanding edge is at least partly interrupted on a side of this side surface and completely closed on an opposite side. The upstanding edge can be manufactured integrally with the brick, for instance in a moulding tray. With such a brick, brickwork can be effected, with one side giving the appearance of a jointless wall. Excess mortar will only exit on the opposite side and therefore needs to be removed only on this one, well accessible side.

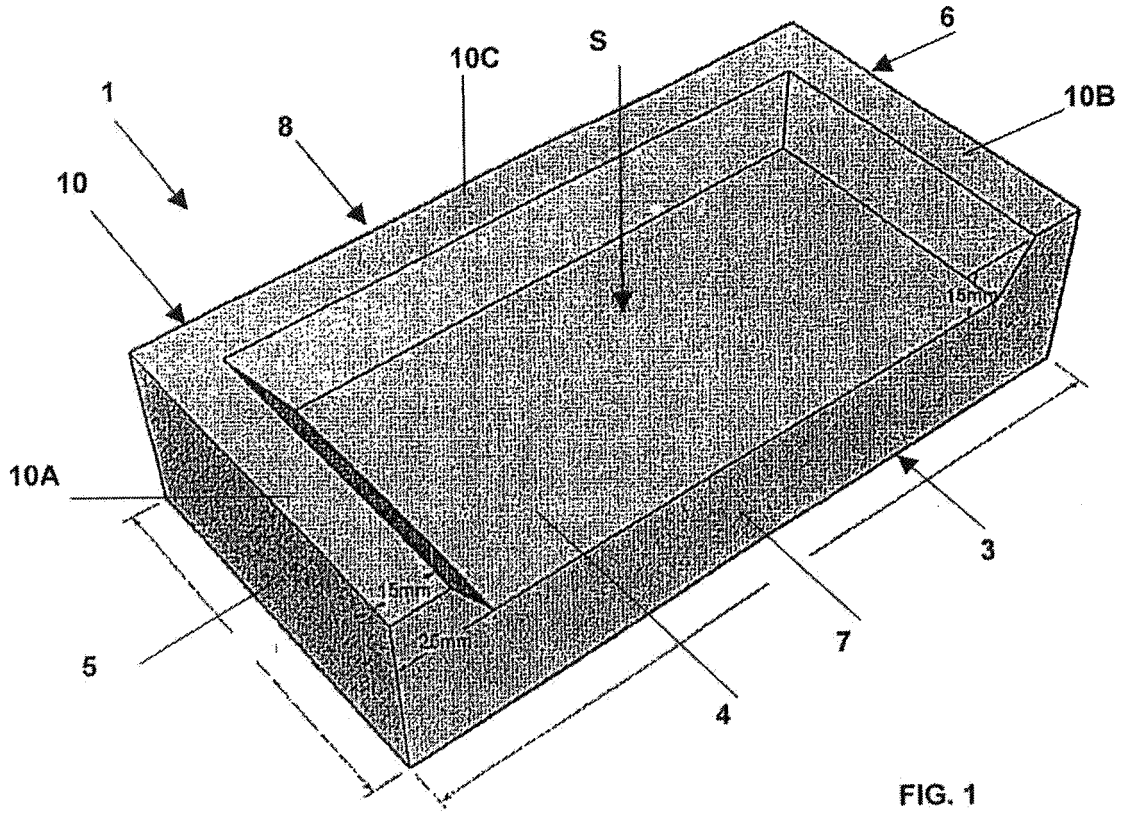

FIG. 1

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Description

[0001] The invention relates to a brick.

[0002] Bricks are known. They are usually laid with the aid of mortar one on top of the other. An amount of mortar is then applied to a previously laid brick, whereupon a new brick is placed thereon and is slightly pressed-on. As a result, the mortar can spread uniformly between the bricks. Excess mortar is pressed outwards and then removed by the bricklayer.

[0003] A drawback of the known brick is that positioning and uniformly pressing-on for obtaining straight, regular joints requires a high degree of craftsmanship. Furthermore, due to wiping away excess mortar, relatively much mortar is lost. It is further often difficult for a bricklayer to reach the side of the brickwork facing away from him, so that excess mortar can remain behind thereon. This may afterwards cause problems with, inter alia, insulation.

[0004] The object of the invention is to provide a brick, with which the above-mentioned drawbacks are at least partly obviated. To that end, the brick according to the invention is characterized in that it is provided on one side with an upstanding edge which extends along at least a part of the circumference and is closed along at least one side and is interrupted along an opposite side.

[0005] With such a brick, mortar can be applied in a receiving provision formed by the upstanding edge. Then, a second brick can be placed on the above-mentioned upstanding edge. As a result, excess mortar will be pressed from the receiving provision, via the interrupted edge, therefore on a predefined first side, which, in use, preferably corresponds to the so-called 'soiled' side. The closed edge prevents mortar from exiting via an opposite, second side. As a result, this second side will remain free of mortar and preferably corresponds, in use, with the so-called 'sight-side'. Excess mortar needs only be removed on the first side. This first side will be easily accessible to the skilled person as he can position himself on this side during bricklaying. As a result, unlike with conventional bricks, no expensive scaffolding or such building equipment is required. Furthermore, as a result, the risk of excess mortar accidentally remaining behind on the brickwork will decrease. As a result, also, the problems associated therewith, such as the earlier mentioned insulation problems will be smaller.

[0006] On the second side, the bricks are set dry, at least without joints, one onto the other. This side requires, in principle, no finishing. Thus, with the bricks, a jointless result can be realised while the bricks are laid in a substantially traditional manner. As, at least at the location of the upstanding edge, the bricks are set dry one onto the other, for correct positioning, that is, positioning the bricks at a regular mutual distance, hardly any special skill is required. The fact is that the bricks can simply be laid on the upstanding edge of a previously placed brick.

[0007] A brick according to the invention can further help a bricklayer with application of a correct amount of mortar, as the receiving provision surrounded by the upstanding edge forms a good visual indication for the required amount of mortar. The bricklayer needs only fill this receiving provision. If desired, the bricks can be delivered with an associated trowel, whose dimensions are adapted to those of the receiving provision of the respective bricks, so that a user can apply the correct amount of mortar even more easily. This saves time and money as less excess mortar will need to be wiped away and less mortar will be lost.

[0008] According to a further aspect of the invention, the bricks may have been manufactured in a moulding tray. Owing to its withdrawable form, the upstanding edge can simply be integrally formed. Normally, such bricks manufactured in moulding trays cannot be set in a dry manner one onto the other. Thereto, they first need to be calibrated, i.e. be made level and/or right-angled. However, with a brick according to the invention this is not necessary. The bricks can be placed on top of one another in the above-described manner, while any manufacturing irregularities in the bricks are smoothed out by the mortar between the bricks, as is done with conventional brickwork. This smoothening action however is largely hidden from sight due to the closed upstanding edge. As a result, at least one side, the sight side of the effected brickwork, will give the appearance of a jointless wall, with bricks laid dry one on top of the other. Thus, with a brick according to the invention manufactured in a moulding tray, bricklaying without joints can be effected. For the sake of completeness, it is noted that on the sight side the bricks need not lie dry one on the other. In practice, a small seam of, for instance, approximately 1 - 2 mm can be present.

[0009] According to a further advantageous aspect of the invention, a side of the brick located opposite the upstanding edge can be provided with bonding enhancing means, such as, for instance, grooves, projections, ridges and/or recesses. Such means help increase the contact surface between the brick and the mortar. As this contact surface is slightly restricted due to the upstanding edges, thus, on balance, the same, at least sufficient bonding capacity can be realised. It is self-evident that the bonding enhancing means extend on the side mentioned preferably within the area which operatively comes into contact with the mortar, which, in general, will amount to an area that extends within the (projected) inside contour of the upstanding edge.

[0010] The invention further relates to brickwork of bricks according to the invention, wherein the interrupted upstanding edges are located on a first side of the brickwork and the closed upstanding edges are located on an opposite side. With such a manner of bricklaying, excess mortar will exit via the first side, not via the second side. Therefore, a bricklayer needs only strip one side (the first side) of excess mortar. The difficultly accessible other side remains clean and needs no further treatment.

[0011] The invention further relates to a method for effecting brickwork with bricks according to the invention.

[0012] In the further subclaims, further advantageous embodiments of a brick, brickwork and a method for effecting this are described. In clarification of the invention, an exemplary embodiment of a brick according to the invention, and the use thereof will be explained in further detail on the basis of the drawing. In the drawing:

Fig. 1 shows, in perspective view, a brick according to the invention, provided with an upstanding edge;
Fig. 2 shows, in cross-section, the use of a brick according to the invention, while brickwork is being effected; and
Figs. 3A and 3B, respectively, show a bottom surface of a brick according to Fig. 1, and an alternative brick, respectively, wherein areas suitable for applying bonding enhancing means are indicated in hatchings.

[0013] Fig. 1 shows, in perspective view, an embodiment of a brick 1 according to the invention, wherein the brick 1 is substantially block-shaped. The brick 1 comprises, in particular, six substantially rectangular side surfaces, i.e. a bottom surface 3, a top surface 4, two end faces 5, 6 and two stretcher faces 7, 8. The top surface 4 is provided along its circumference with an upstanding edge 10. This edge 10 extends by respective edge parts 10A,B,C along three sides of the top surface 4, i.e. the two end faces 5, 6 and one stretcher face 8. Thus, above the top surface 4 a receiving provision S for mortar 15 is formed, while this receiving provision S is open towards one side of the brick 1, in this case a longitudinal or stretcher side 7.

[0014] In the exemplary embodiment shown, the edge 10 is completely interrupted, at least completely omitted, along the stretcher side 7. According to an alternative embodiment (not shown) the upstanding edge 10 can extend at least partly along this stretcher side 7, while at least one interruption is provided (not shown). Further, the upstanding edge parts 10A,B can comprise one or more interruptions (not shown) along the respective end faces 5, 6.

[0015] The brick 1 can further comprise bonding enhancing means, on a side surface 10 located opposite the upstanding edge 10, here, the bottom surface 3. These bonding enhancing means can be designed as projecting parts such as ridges, projections or the like, but are preferably designed as recesses, such as grooves, notches or the like. The latter embodiment causes no deviations in position when a brick 1 is accidentally placed by these means on an upstanding edge 10 of another brick 1. For reducing such a risk of deviations of position even further, the bonding enhancing means preferably extend only within an area which operatively extends above a receiving provision S of another brick 1. Taking into account the fact that the bricks 1 are usually laid in stretcher bond, the bonding enhancing means therefore preferably extend within the areas 12, 12' shown in hatchings in Figs. 3A and 3B, respectively. Here, Fig. 3A shows the bottom surface 3 of a brick 1 whose upstanding edge 10 extends along three sides 5, 6, 8 of the top surface 4 (as shown in Fig. 1) and Fig. 3B shows the bottom surface 3' of a brick 1' whose upstanding edge 10 (not visible) also extends along the fourth side 7', naturally with at least one interruption.

[0016] The brick 1 shown in Fig. 1 has a withdrawable form and, as a result, can be manufactured in, for instance, a moulding tray from, for instance, clay. Here, the upstanding edge 10 can be integrally formed by providing the moulding tray with a suitable, complementary profile. For simplifying withdrawing, the passage between the upstanding edge 10 and the top surface 4 of the brick 1 can be somewhat rounded or bevelled. The bottom surface 3 of the brick will then correspond to the top side of the clay in the filled-up moulding tray. This top side can be wiped off to be smooth, but can also be provided with a profile for forming the above-mentioned bonding enhancing means. Such a profile can be pressed into the clay with, for instance, a profiled tool.

[0017] Fig. 2 shows how a number of bricks 1 according to the invention can be laid one on top of the other. To that end, a bricklayer M first lays a first row of bricks 1, preferably with their receiving provisions S turned upwards and their interrupted edges 10 facing the bricklayer M, as shown in Fig. 2. Then, the receiving provisions S are filled with mortar 15 and a row of second bricks 1 is placed on the first bricks, for instance staggered over half a stretcher length. The second bricks 1 are preferably placed on the first bricks in a position tilted slightly backward, on the completely closed edge 10C situated rearwards from the perspective of the bricklayer M, as shown in Fig. 2. Then, the brick 1 is tilted to a horizontal position, in the direction of arrow R. As a result, the mortar 15 will be spread over the receiving provision S and excess mortar 15 will be pressed outward, through the interrupted edge 10, in the direction of the bricklayer M, as indicated by arrow B. The bricklayer M can then simply remove this excess mortar 15. As, during placing and tilting, the second brick 1 always remains in contact with the edge part 10C and furthermore, this edge part 10C is completely closed, no mortar 15 can exit on this side. Thus, on the side remote from the bricklayer M, which side is normally hard to reach, no excess mortar 15 needs to be removed. Furthermore, on this side remote from the bricklayer M, a surface is formed with an appearance that is tidy and like dry-set masonry which, in principle, needs no further finishing. As a result, the entire bricklaying process can be considerably simplified and accelerated.

[0018] The invention is not limited in any manner to the exemplary embodiments represented in the description and the drawing. All combinations of (parts of) described and/or shown embodiments are understood to fall within the inventive concept. Furthermore, many variations thereon are possible within the framework of the invention as set forth in the following claims.

[0019] For instance, the upstanding edge 10 can extend along other side surfaces of the brick 1. Such an

upstanding edge 10 can also extend along several side surfaces, in particular two opposite side surfaces of the brick 1, for instance the top surface 4 *and* the bottom surface 3. In such a case, both edges 10 are preferably provided on the same side 7 of the brick 1 with interruptions, or be completely omitted. Such an embodiment can be combined with a conventional brick (without upstanding edges), while maintaining the above-described advantages of a brick according to the invention. To that end, alternately, a layer of conventional bricks and a layer of bricks according to the above-mentioned embodiment can be laid on top of each other. The (building) stones can also be manufactured from a different material, for instance concrete or limestone. The bricks can also be placed at some distance from each other in lateral direction so that between the adjacent bricks, vertical joints are formed. In such a case, the edge parts 10A,B which extend along these sides can be provided with interruptions, so that mortar can be pressed out via these interruptions into the vertical joints.

[0020] These and many variants are understood to fall within the framework of the invention as outlined by the claims.

Claims

1. A brick comprising an upstanding edge, which extends along a side surface of the brick, wherein the upstanding edge is at least partly interrupted on one side of this side surface and is completely closed on an opposite side.

2. A brick according to claim 1, wherein the brick is substantially block-shaped and the side surface is substantially quadrangular.

3. A brick according to claim 2, wherein the upstanding edge extends along three sides of the side surface.

4. A brick according to any one of the preceding claims, wherein the upstanding edge is formed integrally with the brick.

5. A brick according to any one of the preceding claims, wherein a side surface of the brick located opposite the upstanding edge is provided with bonding enhancing means.

6. A brick according to any one of the preceding claims, wherein the brick is manufactured in a moulding tray.

7. Brickwork of bricks according to any one of the preceding claims, wherein the bricks are positioned such that the at least partly interrupted edges are all located on a first side of the brickwork and the completely closed edges are all located on a second, opposite side of the brickwork.

8. A method for effecting brickwork with bricks according to any one of claims 1 - 6, wherein an amount of mortar is applied in the space surrounded by the upstanding edge and the side surface of a first brick, whereupon a second brick is placed against this first brick, so that this second brick abuts against at least a part of the upstanding edge of the first brick, and the mortar extending within this upstanding edge.

9. A method according to claim 8, wherein the second brick is placed on the upstanding edge in a somewhat tilted initial position, at the completely closed side, and is then tilted downwards so that mortar located under the second brick is pressed outwards, on the at least partly interrupted side of the upstanding edge.

10. A method according to claim 8 or 9, wherein a bricklayer places the bricks with the at least partly interrupted edge facing him.

11. A method according to any one of claims 8 - 10, wherein the bricks are placed dry next to one another.

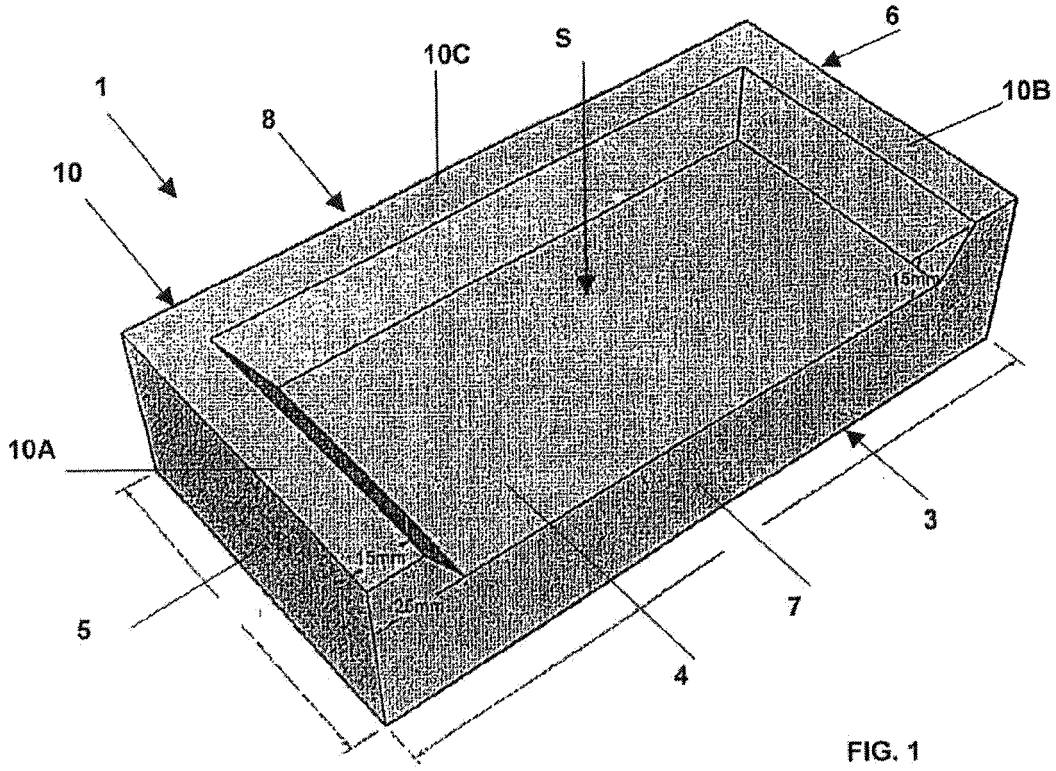

FIG. 1

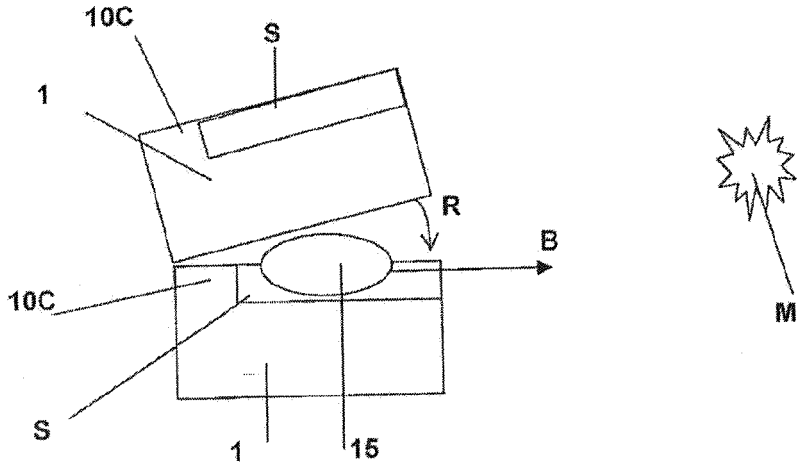

FIG. 2

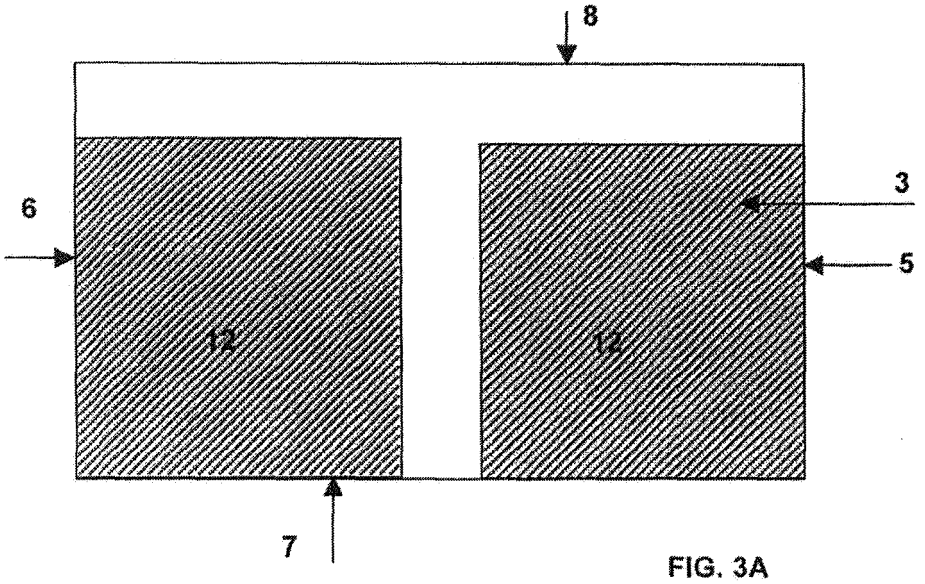

FIG. 3A

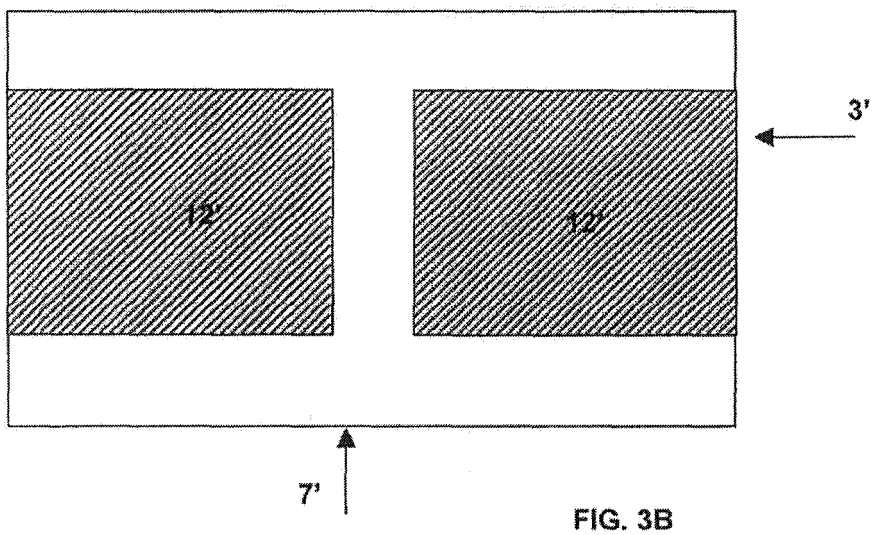

FIG. 3B

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EUROPEAN SEARCH REPORT

Application Number
EP 08 15 4539

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 3 290 849 A (WRIGHT) 13 December 1966 (1966-12-13) * column 1, line 68 - column 2, line 42; figures 3-6 * -----	1-11	INV. E04B2/04
X	BE 1 011 516 A (HEIRBAUT ET AL.) 5 October 1999 (1999-10-05) * page 4, line 18 - line 28; claims 1,10; figure 3 * -----	1-11	

TECHNICAL FIELDS SEARCHED (IPC)

E04B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	24 July 2008	Mysliwetz, Wolfgang

CATEGORY OF CITED DOCUMENTS

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24-07-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3290849 A	13-12-1966	NONE	
BE 1011516 A	05-10-1999	NONE	

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