

SPECIFICATION

Bricks

This invention relates to structural elements, in particular bricks.

According to the present invention, there is provided a brick in which the top surface and at least one of the two end surfaces are formed with an indented region such that a plurality of identical bricks can be bonded together by placing a bonding agent in the said indented regions to form thereby a wall or other structure in which the bonding agent is fully concealed, the indented region on the top surface of the brick being in the form of a V-shaped depression extending lengthwise along the brick and occupying a major proportion of the top surface of the brick; and in which the bottom surface of the brick is formed with at least one indented channel or groove extending lengthwise in said bottom surface.

A brick as defined above may be bonded lengthwise to a similar brick by employing mortar which fills the gap between the end projections of the brick. In this way an adequate bond is achieved between adjacent bricks, using less mortar than with conventional, planar bricks and also giving an aesthetically pleasing appearance to the end product.

Although it is not essential, it is advantageous for that end face of the brick opposite to said one end face to be formed with a plurality of vertical grooves. These grooves can extend over that portion of the face which corresponds in position with the gap between the projection on said one end face. By this means, adhesion of mortar between end faces of adjacent bricks is increased. The grooved end face of the brick is also pleasing in appearance.

One embodiment of the present invention incorporates V-shaped depressions on the top surface of the brick and in both ends of the brick. If, however, one of the ends of the brick is formed with ridges as mentioned above, it is preferred that the V-shaped depression on the top of the brick be of the same width as the gap between the projections on said one end face of the brick.

The bottom surface of a brick in accordance with this invention is formed with at least one indented channel or groove, which can extend along the entire length of the brick.

Our copending patent application No. 8226173 discloses and claims a method of manufacturing from earth a structural element, e.g. a brick or a tile, comprising (a) excavating earth from the ground; (b) removing coarse particles from the earth to leave fine particles; (c) adding to said fine particles an additive comprising oxides of calcium, silicon, and of aluminium or aluminium and iron; (d) placing the mixture thus obtained into a mould and pressing the mixture to shape it in the mould; and (e) removing the shaped material from the mould and allowing it to dry.

For a better understanding of the invention, and to show how the same may be carried into effect, reference will now be made by way of example, to the accompanying drawings, in which:

Figure 1 is a plan view of one embodiment of a brick in accordance with the invention;

Figure 2 is a side elevation of the brick shown in Figure 1;

Figure 3 is an end elevation of the left hand end of the brick shown in Figure 1;

Figure 4 is an end elevation of the right hand end of the brick shown in Figure 1;

Figure 5 is a plan view of the base of the brick shown in Figure 1;

Figure 6 is a plan view of a series of bricks such as that shown in Figure 1 bonded together end to end;

Figure 7 is a side elevation of the arrangement shown in Figure 6;

Figures 8 to 12 illustrate a second embodiment of a brick in accordance with the invention showing, respectively, a side view, bottom view, perspective view from above, end view and top view of the brick;

Figure 13 shows a decorative wall built with the brick illustrated in Figures 8 to 12; and

Figure 14 shows a detailed view of part of the wall of Figure 13.

Referring to Figures 1 to 4, the brick 1 has an upper surface comprising edge portions 2 and 3 separated by a V-shaped groove 4. The left hand end of the brick has two vertical projections 5 and 6 separated by a planar region. The right hand end of the brick includes planar regions 8 and 9 between which there is an area 10 formed of the vertically disposed grooves which, in plan, have a castellated appearance (see Figure 1). Projections 5 and 6 have outwardly facing curved portions 11, and inwardly facing planar portions 12. The side walls 13 of the brick are plain.

Referring now to Figure 5, the underside of the brick comprises a peripheral area 14 and two rectangular areas 15 and 16, the areas 14, 15 and 16 being separated from one another by a recessed area 17. The lateral edges 18 of the brick are upwardly and outwardly curved so as to meet the side wall portions 13 (see Figure 2).

Referring now to Figures 6 and 7, a number of identical bricks in accordance with this invention are shown bonded lengthwise one to another. Individual bricks are marked 1A, 1B and 1C. As seen in Figure 6, a layer of mortar 19 occupies the space between surfaces 10 and 7 of adjacent bricks. As shown in Figure 7 projections 5 and 6 serve to obscure the mortar 19 from view in side elevation. The mortar which is in place between adjacent horizontal layers of bricks is likewise invisible in side elevation. The mortar fits into the area defined between the V-shaped groove 4 of the lower brick and the recessed surface portion 17 of the brick above. In this way, satisfactory bonding is achieved

29
2

between adjacent bricks in one layer, and between adjacent layers of bricks, while the whole structure presents an attractive appearance from the outside. The end faces of the bricks may also be used to present decorative features in appropriate constructions.

Referring now to Figures 8 to 12, the brick illustrated has V-shaped depressions in its top surface 20 and in both ends 21 and 22. The bottom surface 23 of the brick includes two parallel channels 24 and 25 which extend the full length of the brick. The V-shaped depression in the top surface 20 of the brick is flanked by flat surface portions 26 and 27, while the V-shaped depressions in the ends 21 and 22 are flanked by flat surface portions 28 and 29; these latter portions are adjacent to curved portions 30 which adjoin the plain sides 31 of the brick. Further curved portions 32 and 33 link the side 31 and bottom 23 of the brick.

As shown in Figures 13 and 14, the brick of Figures 8 to 12 can be used to form an aesthetically pleasing structure in which the bonding agent (e.g. mortar) is totally concealed. The curved portions 30, 32 and 33 accentuate the delineation between individual bricks in the wall.

CLAIMS

1. A brick in which the top surface and at least one of the two end surfaces are formed with an indented region such that a plurality of identical bricks can be bonded together by placing a bonding agent in the said indented regions to form thereby a wall or other structure in which the bonding agent is fully concealed, the indented region on the top surface of the brick being in the form of a V-shaped depression extending lengthwise along the brick and occupying a major proportion of the top surface of the brick; and in which the bottom surface of the brick is formed with at least one indented channel or groove extending lengthwise in said bottom surface.

2. A brick as claimed in claim 1, wherein the top surface and both end surfaces of the brick are formed with V-shaped depressions.

3. A brick as claimed in claim 1, wherein one end face of the brick is formed with a plurality of vertical grooves.

4. A brick, substantially as hereinbefore described with reference to, and as illustrated in, Figures 1 to 7 of the accompanying drawings.

5. A brick, substantially as hereinbefore described with reference to, and as illustrated in, Figures 8 to 14 of the accompanying drawings.

between adjacent bricks in one layer, and between adjacent layers of bricks, while the whole structure presents an attractive appearance from the outside. The end faces of the bricks may also be used to present decorative features in appropriate constructions.

Referring now to Figures 8 to 12, the brick illustrated has V-shaped depressions in its top surface 20 and in both ends 21 and 22. The bottom surface 23 of the brick includes two parallel channels 24 and 25 which extend the full length of the brick. The V-shaped depression in the top surface 20 of the brick is flanked by flat surface portions 26 and 27, while the V-shaped depressions in the ends 21 and 22 are flanked by flat surface portions 28 and 29; these latter portions are adjacent to curved portions 30 which adjoin the plain sides 31 of the brick. Further curved portions 32 and 33 link the side 31 and bottom 23 of the brick.

As shown in Figures 13 and 14, the brick of Figures 8 to 12 can be used to form an aesthetically pleasing structure in which the bonding agent (e.g. mortar) is totally concealed. The curved portions 30, 32 and 33 accentuate the delineation between individual bricks in the wall.

CLAIMS

1. A brick in which the top surface and at least one of the two end surfaces are formed with an indented region such that a plurality of identical bricks can be bonded together by placing a bonding agent in the said indented regions to form thereby a wall or other structure in which the bonding agent is fully concealed, the indented region on the top surface of the brick being in the form of a V-shaped depression extending lengthwise along the brick and occupying a major proportion of the top surface of the brick; and in which the bottom surface of the brick is formed with at least one indented channel or groove extending lengthwise in said bottom surface.
2. A brick as claimed in claim 1, wherein the top surface and both end surfaces of the brick are formed with V-shaped depressions.
3. A brick as claimed in claim 1, wherein one end face of the brick is formed with a plurality of vertical grooves.
4. A brick, substantially as hereinbefore described with reference to, and as illustrated in, Figures 1 to 7 of the accompanying drawings.
5. A brick, substantially as hereinbefore described with reference to, and as illustrated in, Figures 8 to 14 of the accompanying drawings.

Printed for Her Majesty's Stationery Office by the Courier Press, Leamington Spa, 1983. Published by the Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.

