

The invention relates to a plate-like, square paving stone, having a flat surface and strip-like extension members which extend vertically relative to the lateral
5 faces, each lateral face having two extension members.

It is known to dispose in the lateral faces of plate-like paving stones (EP-A-0 274 344, DE-U-87 17 484), two strip-like extension members which act as spacer
10 members and permit formation of joints which may be filled with soil or mineral materials. Whereas in the paving stone according to EP-A-274 344 one of the extension members in each case is disposed close to the diagonally-opposed corner edge of two mutually-opposed
15 lateral faces, which may be curved, in the paving stone according to DE-GM-87 17 484 the extension members have, in the lateral faces, larger spacings from the corner edges. Only a few layout configurations are possible with the known paving stones; the paving stone
20 according to EP-A-0 274 344 leads to the formation of inaccessible joints.

The purpose of the invention is to provide a paving stone which is suitable for a large number of layout
25 combinations while retaining symmetrical and rectilinear joints.

In accordance with the invention this purpose is fulfilled in that the lateral faces, spaced next to one

another, each have two extension members, of which one extension member in each case is disposed on diagonal corner areas of adjacent lateral faces, and in that the other extension member in each case of each lateral face is formed at a spacing from the two other diagonal corner areas in the lateral faces. In this way the paving stones, providing mutual support for the extension members, may be laid out optionally with a wide or a narrow spacing, and when there is intermediate support, with no spacing therebetween, so that fillable joints of different widths may be obtained. Moreover, the paving stone affords the possibility, in addition to wide or small spacing, of cross bonded layout (arrangement in rows), or running bond layout (offset arrangement), so that a plurality of layout combinations may be obtained. In addition, the corner-edge arrangement of extension members renders the layout accessible, which renders laying out the paving stones considerably simpler for skilled personnel. The two extension members of each lateral face are appropriately formed with equal spacings in the lateral faces.

It is furthermore provided that, in order to form a trapezoidal cross-section, the extension members at the projecting free end are defined by lateral faces which extend obliquely to one another. The cross-sectional shape of the extension members simplifies moulding of the paving stones in concrete tools. Furthermore, the

height of the extension members corresponds to the thickness of the paving stone. It is also feasible to design the extension members with a height less than the thickness of the paving stone, the extension members terminating beneath the surface. The last-named design, in addition to providing extension members which are defined over part of their height by inclined faces extending in the direction of the surface, entails the advantage that, upon pointing, optically cohesive joints may be formed.

In a variant of the design of the paving stone, it is provided that an extension member in each case is disposed on a respective one of the two associated corner edges of two mutually-opposed lateral faces, and the extension members of the two other lateral faces are disposed at a distance apart which is slightly greater than the length, seen from the flat surface of the paving stone, of the extension members disposed on the corner edges. This design also of the extension members entails the abovementioned advantages as regards possible types and spacings of layout.

It is self-evident that the extension members of this paving stone may be defined by lateral faces extending obliquely relative to one another at the projecting free end also, in order to simplify pointing. Moreover, the extension members may be constructed with the same

height, or a lesser height, than the thickness of the paving stone.

Finally, it is possible to define the extension members
5 at the upper end by an inclined face extending in the direction of the surface.

The invention is illustrated in the drawings, with reference to embodiments given by way of example. Shown
10 are:

- Fig. 1: a plan view of a paving stone;
- Fig. 2: a side elevation of a paving stone according to Fig. 1;
- 15 Fig. 3: a further side elevation of a paving stone according to Fig. 1;
- Fig. 4: a plan view of a varied construction of a paving stone;
- Fig. 5: a side elevation of a paving stone according to Fig. 4;
- 20 Fig. 6: a further side elevation of a paving stone according to Fig. 4;
- Fig. 7: another side elevation of a paving stone according to Fig. 4;
- 25 Fig. 8: a partial view of the paving stone according to Fig. 1;
- Fig. 9: a plan view of a layout pattern (cross-bond) with paving stones according to Fig. 1;

- Fig. 10: a plan view of a further layout pattern with paving stones according to Fig. 1;
- Fig. 11: a plan view of a further layout pattern (running bond) with paving stones according to Fig. 1;
- Fig. 12: a plan view of a layout pattern (cross bond) with paving stones according to Fig. 4;
- Fig. 13: a plan view of a further layout pattern (cross bond) with paving stones according to Fig. 4;
- Fig. 14: a plan view of a varied layout pattern (running bond) with paving stones according to Fig. 4, and
- Fig. 15: a layout pattern (running bond) of a different construction with paving stones according to Fig. 4.

The plate-like paving stone a according to Figs. 1 to 3 and 8 has a flat surface 2 and, in the embodiment, is square in cross-section. Integrally formed on the lateral faces 3 of the paving stone 1 are respectively two extension members 4' and 4", in such a way that, on diagonal mutually-opposite corner edges 5 of adjacent lateral faces, there is a respective extension member 4' and, with a slightly larger spacing than the length of the extension member 4' from the two other diagonal mutually-opposite corner edges 6, seen on the flat surface of the paving stone, a respective extension

member 4". In the embodiment, the extension members 4' and 4" are trapezoidal in cross-section. For this purpose the vertical lateral faces 7 of extension members 4' and 4" extend obliquely outwards and extend
 5 towards one another. Furthermore, the extension members 4', 4" are defined by inclined faces 19 (Fig. 8) over part of the height in the direction of the surface 2.

In the paving stone 9 in Figs. 4 to 6, lateral faces 13
 10 or 15 each have two extension members 12' and 12". The extension members 12' are disposed on one each of the two associated corner edges of mutually-opposite lateral faces 13, and the extension members 12 are disposed at a spacing slightly larger than the length,
 15 seen on the flat surface of the paving stone, of the extension members 12' of the corner edges 14, on the two other lateral faces. In turn the extension members 12' and 12" , as Fig. 4 shows in particular, have a trapezoidal cross-section as a result of inclined
 20 lateral faces 20. In the embodiment the extension members 12', 12" extends approximately across the entire thickness of the paving stone, or terminate by means of inclined faces 21 at a small spacing from the surface 2 thereof (Fig. 5).

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In the example of layout of the paving stones 1 in Fig. 9, the paving stones 1 with their extension members 4', 4' and 4", 4" are supported one on the other, giving rise to wide spacing joints 17, which may be

filled for example with soil. The cross-bonding thus obtained is advantageously suitable for park areas or terraces, surfaces where a small degree of loading is to be expected.

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The paving stones 1 according to the example of layout in Fig. 10 are likewise laid out in a cross-bonded pattern, yet in such a way that the extension members 4' and 4" are respectively supported on adjacent paving stones 1. In this way spacing joints 18 of half width are formed, which may be advantageously filled with chippings, and which contribute to providing a high-load paving, e.g. highway areas.

15 In Fig. 11 the paving stones 1 are shown in a running bond layout in such a way that the extension members 4' and 4" are supported on adjacent offset paving stones 1. In this layout example also there result spacing joints 18 of restricted width, which may preferably be
20 filled with chippings.

Fig. 12 shows a layout example with paving stones 9 according to Fig. 4. In this case adjacent paving stones 9 are supported on one another with their
25 extension members 12', 12' and 12", 12", forming wide spacing joints (cross bond).

According to the layout example in Fig. 13, the paving stones 9 are in a cross-bond pattern, yet are laid out

with narrow spacing joints 18. For this purpose the extension members 12', 12" are respectively supported directly on adjacent paving stones 9.

- 5 In the layout example in Fig. 14, the paving stones 9 are offset in running-bond pattern, adjacent paving stones 9 being supported on one another with the extension members 12', 12' or 12", 12", and forming wide spacing joints 17.

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In the layout example in Fig. 15, the paving stones 9 are offset in running-bond pattern, the extension members 12', 12" being supported on adjacent paving stones 9. In this case narrow spacing joints 18 may be

15 formed.



CLAIMS

1. Plate-like, square paving stone, having a flat surface and strip-like extension members, which extend vertically relative to the lateral faces, characterised in that each lateral face has two extension members, wherein one respective extension member (4') is disposed at each of the diagonally opposed corners (5) of adjacent lateral faces (3), and the other respective extension member (4'') is disposed at a slightly greater spacing than the length of the extension member (4'), when viewed from above the flat surface of the paving stone, from the other two diagonally opposed corners (6) of adjacent lateral faces (3).

2. Paving stone according to claim 1, characterised in that the extension members (4', 4'') are defined, towards the protruding free end, by lateral faces (7), which extend inclinedly relative to one another.

3. Paving stone according to claim 1, characterised in that the height of the extension members (4', 4'') corresponds to the thickness of the paving stone.

4. Paving stone according to claim 1, characterised in that the height of the extension members (4', 4'') is less than the thickness of the paving stone, and such extension members terminate below the surface (Fig. 5).

5. Paving stone according to claims 1 and 4, characterised in that the extension members (4', 4'') are defined, at the upper end, by means of an inclined face (19), which extends in the direction of the surface.



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6. Paving stone according to claim 1, characterised in that the two extension members (4', 4'') of each lateral face are provided at equal spacings from each other in the lateral faces.

7. Plate-like, square paving stone, having a flat surface and strip-like extension members, which extend vertically relative to the lateral faces, characterised in that each lateral face has two extension members, wherein one respective extension member (12') is disposed at one of the two associated corners (14) of oppositely situated lateral faces (15), and the extension members (12'') are disposed at a slightly greater spacing than the length of the extension members (12'), when viewed from above the flat surface of the paving stone, from the corners (14) at the other two lateral faces (Fig. 4).

8. Paving stone according to claim 7, characterised in that the extension members (12', 12'') are defined, towards the protruding free end, by lateral faces (20), which extend inclinedly relative to one another.

9. Paving stone according to claim 7, characterised in that the height of the extension members (12', 12'') corresponds to the thickness of the paving stone (Fig. 6).

10. Paving stone according to claim 7, characterised in that the height of the extension members (12', 12'') is less than the thickness of the paving stone, and such extension members terminate below the surface.



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11. Paving stone according to claim 7, characterised in that the extension members (12', 12'') are defined, at the upper end, by means of an inclined face, which extends in the direction of the surface.