

Title (en)

BUILDING ELEMENT FOR THE CONSTRUCTION OF BUILDINGS AS WELL AS AN ABUTMENT ELEMENT AND METHOD OF BUILDING
PILLARS AND WALLS WITH SUCH BUILDING ELEMENTS

Publication

EP 0186109 A3 19871223 (DE)

Application

EP 85116138 A 19851218

Priority

- PL 25112384 A 19841221
- PL 25112484 A 19841221
- PL 25112584 A 19841221
- PL 25406585 A 19850619

Abstract (en)

[origin: EP0186109A2] According to the present invention, the component having the shape of a parallelepiped, the cross-section of which has a trapezoidal key, the longer base surface of which preferably forms its edge, with at least one of its corners having a cut-out provided therein, the edges of which form an angle of 30 to 150 DEG and/or possibly at least one of its corners being provided with a tongue having the form of a straight prism, preferably having a trapezoidal base surface, is characterised in that on at least one side wall of the component there is arranged at least one triangular, rectangular, trapezoidal, semicircular or OMEGA -shaped slot or on one of the base surfaces of the component there is arranged at least one triangular, rectangular, trapezoidal or semicircular slot, and on the opposite base surface there is arranged a tongue corresponding thereto with respect to form and position, or on at least one side wall of the component there is arranged at least one triangular, rectangular, trapezoidal, semicircular or OMEGA -shaped slot (9), and on one of the base surfaces of the component there is arranged at least one triangular, rectangular, trapezoidal or semicircular slot (10) and on the opposite base surface there is arranged at least one tongue (11) corresponding thereto with respect to form and position. The component according to the invention is solid or provided with openings, with a T-shaped opening (7) parallel to the trapezoidal key being arranged in its cross-section, the legs (8) of which are arranged at the side of the trapezoidal key, or in that a T-shaped opening parallel to the trapezoidal key is arranged in its cross-section, the legs of which are arranged at the side of the trapezoidal key and which is divided in its axis by a partition, or in that a T-shaped opening parallel to the trapezoidal key is arranged in its cross-section, the legs of which are arranged at the side of the trapezoidal key, and which is divided in its axis by a partition and its arms have additional pre-portions arranged in the direction of the sides resting against the trapezoidal key, or in that a T-shaped opening parallel to the trapezoidal key is arranged in its cross-section, the legs of which are arranged at the side of the trapezoidal key and which is divided by two partitions symmetrically located on either side of the axis of the component, or in that a T-shaped opening parallel to the trapezoidal key is arranged in its cross-section, the legs of which are arranged at the side of the trapezoidal key and which is divided by two partitions symmetrically located on either side of the axis of the components and its legs have additional pre-portions arranged in the direction of the sides resting against the trapezoidal key, or in that in its cross-section at least four slot-like openings preferably with a rectangular cross-section are symmetrically arranged opposite the axis of the component in at least two arrays parallel to the edge of the component and staggered with respect to each other. The component having the shape of a parallelepiped, the cross-section of which has a trapezoidal key, the longer base surface of which preferably forms its edge, one of its corners being provided with a tongue having the form of a straight prism at the longer edge of the component, said prism preferably having a trapezoidal base surface, is characterised in that the second corner has at the longer edge of the component a stop with a cantilever stone, preferably of a trapezoidal configuration, which extends vertically to the stop, or the second corner has at the longer edge of the component a stop with a cantilever stone preferably of a trapezoidal configuration, which extends vertically to the stop, and on one of the base surfaces of the components there is arranged at least one triangular, rectangular, trapezoidal or semicircular slot, and on the opposite base surface there is arranged at least one tongue corresponding thereto with respect to position and form, or the second corner has at the longer base surface a stop with a cantilever stone preferably of a trapezoidal configuration which extends vertically to the stop, and in that on at least one side wall of the component there is arranged at least one triangular, rectangular, trapezoidal, semicircular or OMEGA -shaped slot, or in that the second corner has at the longer edge of the component a stop with a cantilever stone, preferably of a trapezoidal configuration, which extends vertically to the stop, on one of the base surfaces of the component there is arranged at least one triangular, rectangular, trapezoidal or semicircular slot and on the opposite base surface there is arranged at least one tongue corresponding thereto with respect to position and form, and on at least one side wall of the component there is arranged at least one triangular, rectangular, trapezoidal or semicircular or OMEGA -shaped slot. Method for erecting reinforced concrete or concrete pillars in construction projects with frame or half-frame construction, characterised in that at least one small or medium component according to the invention is erected at the location where the pillar is to be erected, preferably on a correction post, and that upon incorporating the reinforcement further small and/or medium components may be erected all around to form the surroundings, preferably with offset horizontal joints such that they are located closely next to each other under simultaneous formation of the pillar core, preferably by sectionwise introduction and condensing of the concrete mix forming a monolytic core, the parts of the surroundings of the core being kept, if required, in their original position by means of technological auxiliary equipment guaranteeing the stable position of the components and being removed upon reaching the required strength through the core, whereby a....[lacuna] consisting of a core and surroundings connected therewith in the form of small and medium components connected to this core and to one another is erected. The method for erecting metal pillars consists in that the rigid steel insert and possibly a loose reinforcement is erected at the location where the pillar is to be erected, preferably on a correction post, and that then small and/or medium components forming the surroundings of the pillar are erected, preferably with offset horizontal joints such that they are located closely next to each other, with simultaneous, preferably sectionwise introduction and condensing of the concrete mix into the cavities between the components and the inserts, the parts of the surroundings being kept, if required, in their original position by means of technological auxiliary equipment guaranteeing their constant position and being removed upon reaching the corresponding strength through the concrete mix. From the small or medium components according to the invention a wall course is erected up to at least the level of a component, then a further wall course from components having the same or a different cross-section, preferably with different levels, in such a way that the contacting tongues of two components of one wall course partially or completely engage in the trapezoidal key of a component of the second wall course or contact the outer edge of the trapezoidal key of a component of the second wall course or the second wall course is erected at a distance, preferably as an alternative, in such a way, that a cavity is formed therebetween, whereafter the further components of the individual wall courses are erected alternately up to the required wall level. During the erection of the wall, the joints are successively filled with mortar or glue as required and at the same time horizontal and/or vertical reinforcements are introduced into the selected joints, and the vertical slots and cavities in the components provided with openings as well as additional cavities formed between the components of the two wall courses are possibly completely or partially, preferably successively filled with thermal insulation material. The vertical slots formed by the external cut-outs of the components are completely or partially sealed with thermal insulation material and the finishing courses of the wall are completed. <IMAGE>

IPC 1-7

E04B 2/46; E04B 2/52

IPC 8 full level

E04B 2/46 (2006.01); **E04B 2/52** (2006.01); **E04B 2/02** (2006.01)

CPC (source: EP)

E04B 2/46 (2013.01); **E04B 2/52** (2013.01); **E04B 2002/021** (2013.01); **E04B 2002/0213** (2013.01); **E04B 2002/0232** (2013.01)

Citation (search report)

- [A] AT 297284 B 19720327 - GROUTLOCK CORP [US]
- [A] US 4262463 A 19810421 - HAPPEL JOSEPH
- [A] US 1704255 A 19290305

Cited by

CN105507485A; ES2297989A1; CN106087706A; ITUB20156262A1; CN103334758A; US8677715B2; WO2011080619A1; WO2007065961A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0186109 A2 19860702; EP 0186109 A3 19871223

DOCDB simple family (application)

EP 85116138 A 19851218