

April 12, 1938.

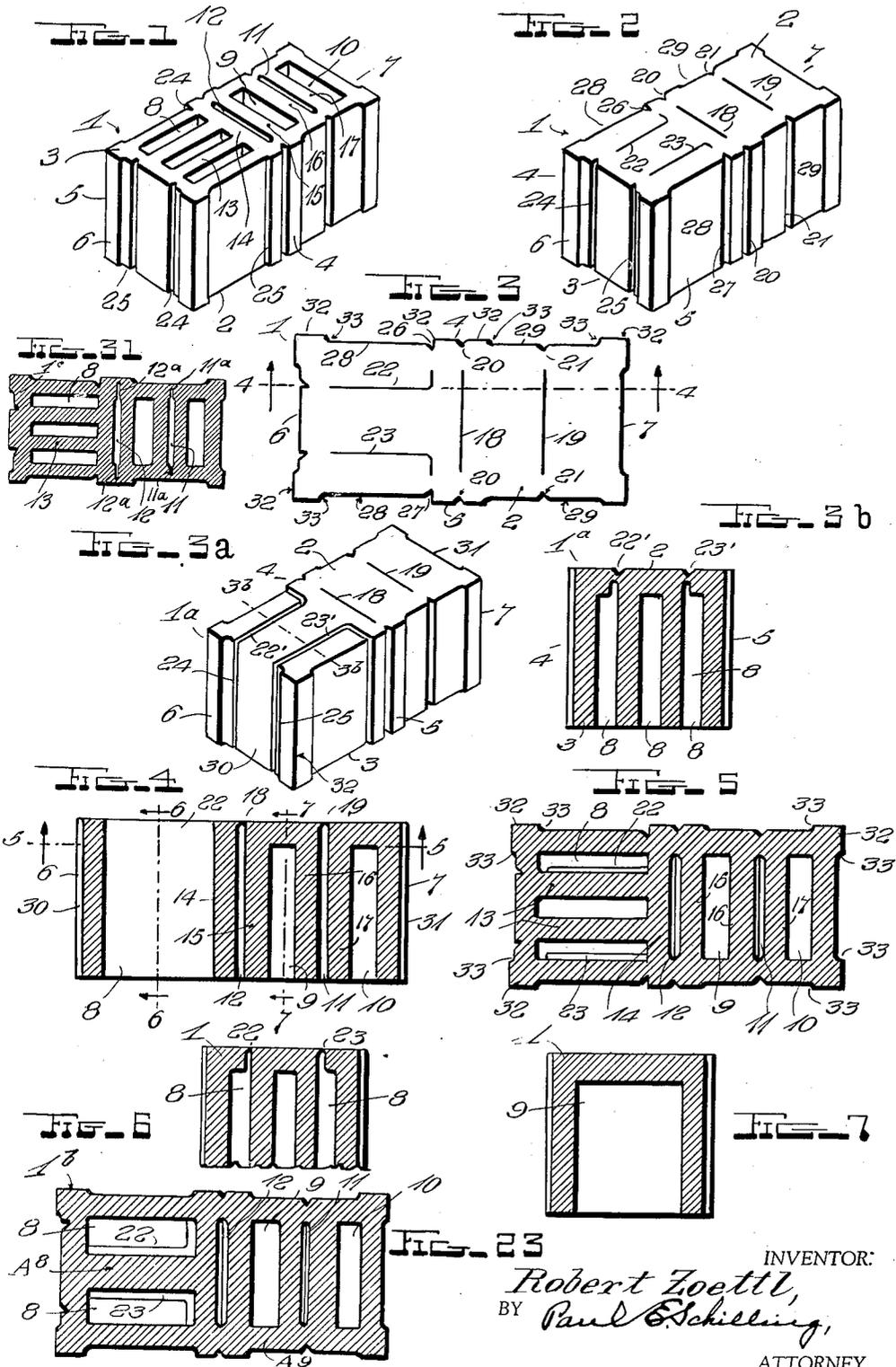
R. ZOETTL

2,114,244

BUILDING STRUCTURE

Filed Oct. 21, 1936

4 Sheets-Sheet 1



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April 12, 1938.

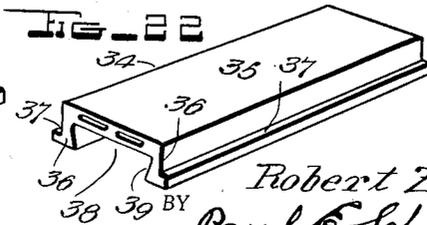
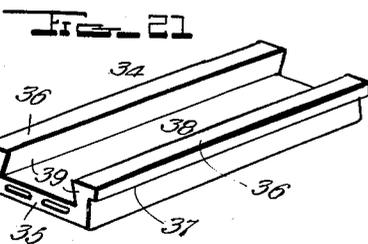
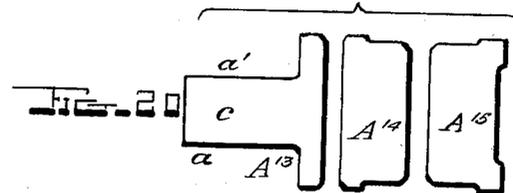
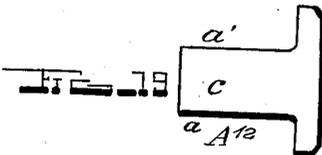
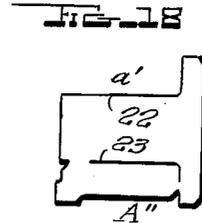
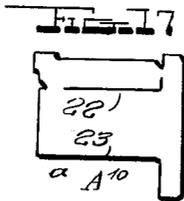
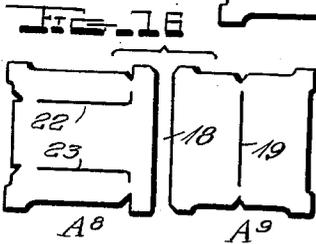
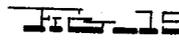
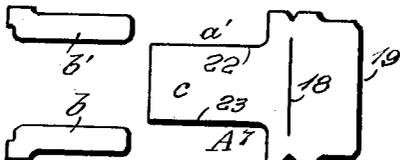
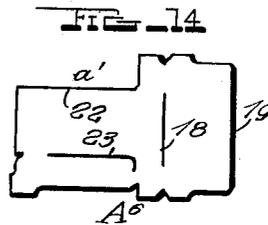
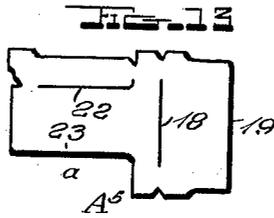
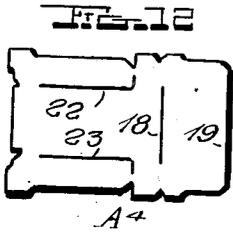
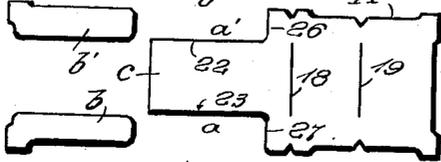
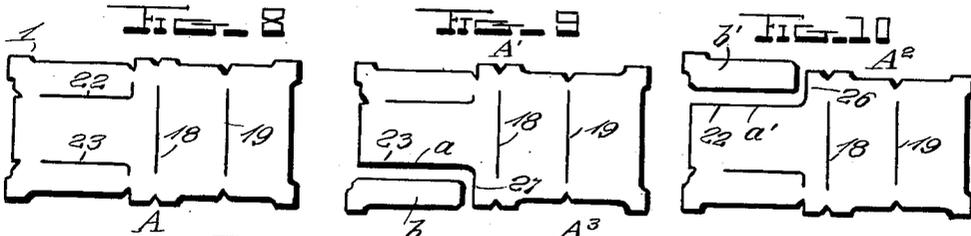
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BUILDING STRUCTURE

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4 Sheets-Sheet 2



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BUILDING STRUCTURE

Filed Oct. 21, 1936

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FIG. 24

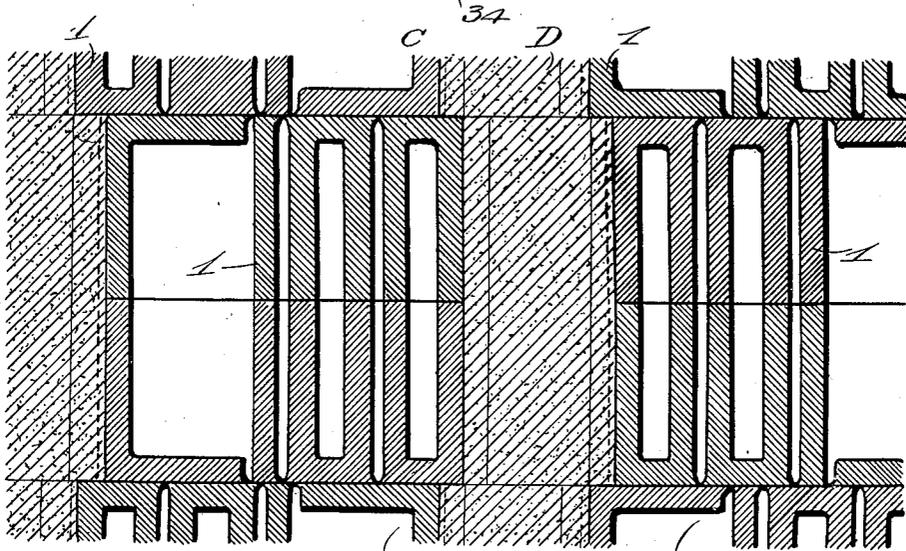
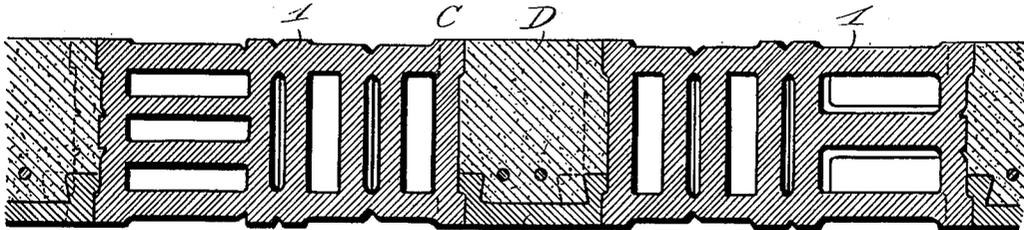


FIG. 25

FIG. 26

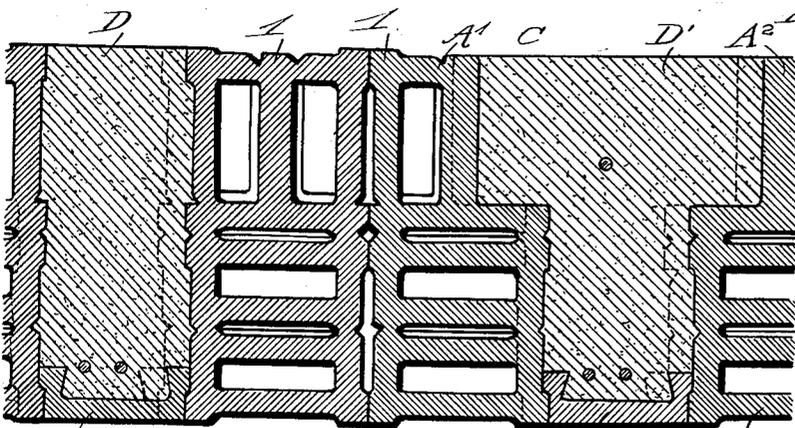
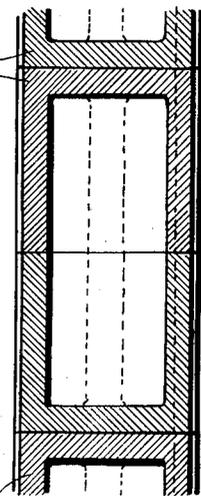


FIG. 27



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FIG. 27

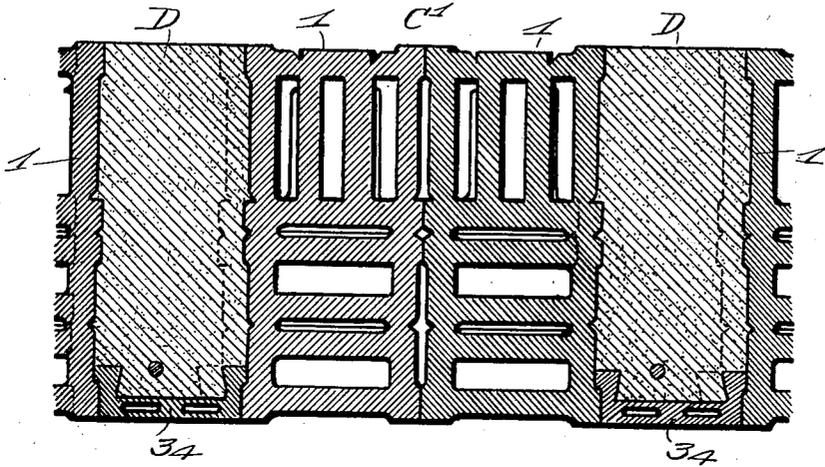


FIG. 28

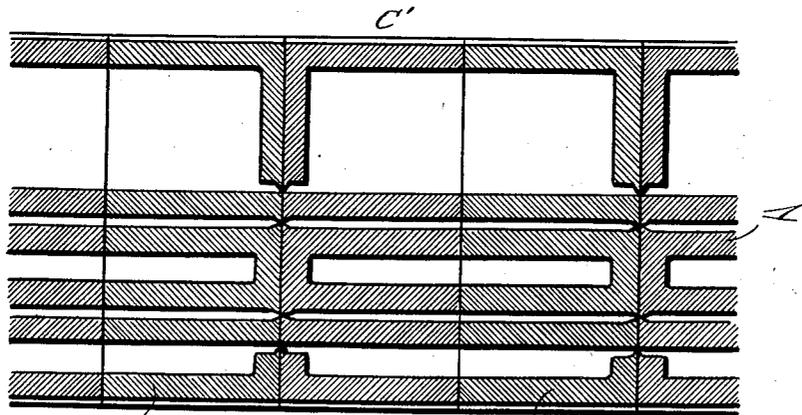
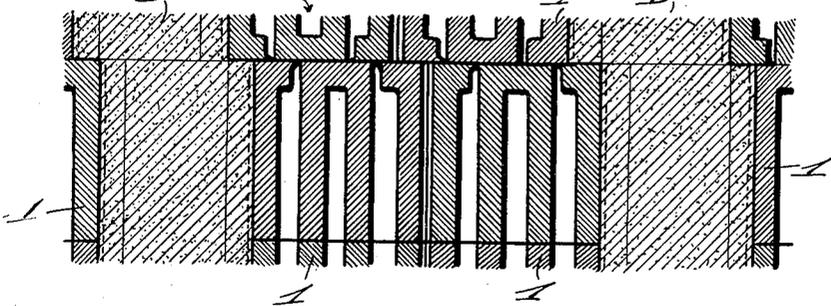


FIG. 29



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UNITED STATES PATENT OFFICE

2,114,244

BUILDING STRUCTURE

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Application October 21, 1936, Serial No. 106,856
In Germany November 27, 1935

14 Claims. (Cl. 72-41)

This invention relates to certain new and useful improvements in building structures, and particularly to hollow building blocks or tiles, and to wall, ceiling and like building constructions in which such building blocks or tiles are designed to be used.

One object of the invention is to provide a multiform or universal construction of hollow building block or tile which may be used as a standard block unit and which is capable of ready and convenient subdivision as to length, width and height to produce component parts of suitable shapes and of different dimensions for various uses for which separate and independently formed units have heretofore generally been employed in the construction of ceilings, walls, chimneys, partitions and various other parts of buildings, whereby the necessity of producing a plurality of different sizes and forms of individual units for the various purposes required in such building constructions may be avoided.

Another object of the invention is to provide a building block or tile which is equally well adapted for the construction of walls and of ceilings such as of the reinforced concrete hollow tile type, and which not only may be used as a standard unit but is divisible into all the form pieces generally required in the ordinary erection of a building structure, such as three-quarters, halves, quarters, corner blocks, right and left window blocks, facing tiles and bonding tiles, for use in main and partition walls, ceilings, etc., and in the construction of pilasters, ledges, ribs, window framings and for facading purposes.

Still another object of the invention is to provide a multiform, universal or one-type block which is easy to sort, handle or staple, which may be specified by the architect as a single block item for the many and various uses of blocks in different forms and sizes required in a building structure, thus doing away with the necessity of the architect figuring how many different sizes and types of blocks are needed for a certain building, which allows the mason or bricklayer to obtain from the master or standard block unit by means of a few deft blows of his hammer or trowel whatever subforms and sizes he requires, and which greatly simplifies building operations and secures economy in handling and using such blocks from manufacture by the pressing machine to the mason or bricklayer in the various intermediate phases.

Still another object of the invention is to provide a six-sided hollow building tile or block which is closed by shell portions on five of its

six sides so as to enable it to be laid without falsework or use of void closures and in such manner that mortar or concrete cannot enter the voids thereof, which is so constructed as to allow full mortaring without outside exposure of the mortar, and which is adapted, in a ceiling structure, for supporting joint closing plates and for firm anchorage engagement with concrete fillings in a most effective manner.

Still another object of the invention is to provide a hollow block or tile in which the relative arrangement of the voids and webs is such as to secure the production of a block or tile of maximum strength, one adapted to secure a better load distribution than is possible by the use of blocks of ordinary type, and one adapted in ceiling construction to be laid to sustain upper or lower pressures, as the case may be, to most effectively meet requirements for negative or positive flexing movements.

Still another object of the invention is to provide a hollow building block which may be used with other standard building blocks or units employed in wall, ceiling and other building constructions, and which adapts the laid blocks to be arranged in a staggered order to obtain a firm interlock with concrete fillings, whereby the use of an overlay of concrete to secure a secure binding of the blocks is rendered unnecessary.

With these and other objects in view, the invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Fig. 1 is a bottom perspective view, looking toward one end of the block or tile, of a building block or tile constructed in accordance with my invention.

Fig. 2 is a top perspective of the block or tile looking toward the opposite end thereof.

Fig. 3 is a top plan view of the block.

Figs. 3a and 3b are, respectively, a perspective view similar to Fig. 3, and a cross-section on line 3b-3b of Fig. 3a, showing a modification in the block structure.

Fig. 4 is a vertical longitudinal section through the block on line 4-4 of Fig. 3.

Fig. 5 is a horizontal transverse section on line 5-5 of Fig. 4.

Fig. 6 is a vertical transverse section on line 6-6 of Fig. 4.

Fig. 7 is a vertical longitudinal section on the line 7-7 of Fig. 4.

Figs. 8 to 20, inclusive, are plan views showing

the capability of division of the block into its various sub-forms.

Figs. 21 and 22 are perspective views of a joint closing plate or tile.

5 Fig. 23 is a sectional view of another slightly modified block or tile.

Fig. 24 is a horizontal section through a portion of a ceiling showing one mode of employing blocks of my improved construction therein.

10 Fig. 25 is a horizontal and Fig. 26 a vertical section through the ceiling structure shown in Fig. 24.

Fig. 27 is a view similar to Fig. 24 showing another manner of employing the blocks in a ceiling structure.

15 Figs. 28 and 29 are views corresponding to Figs. 25 and 26 of the structure shown in Fig. 27.

Fig. 30 is a view similar to Figs. 24 and 27 showing still another arrangement of blocks in a ceiling structure.

20 Fig. 31 is a sectional view showing still another modified form of block.

Referring now more particularly to the drawings, 1 designates my improved hollow building block or tile, which may be made of any suitable material and which as shown is of six sided type and of oblong rectangular form, said block having top and bottom faces 2 and 3, side faces 4 and 5 and end faces 6 and 7, respectively. These terms are employed for convenience of description and without regard to the position of the block when used in a building construction, as it will be understood that the block may be arranged lengthwise in use in either a horizontal or a vertical position and that what may be regarded as the top, bottom and sides will accordingly vary in these positions. The block as a whole is a building unit which may be made of any desired size, or of a standard size or multiple thereof. I do not confine the invention to any particular size or range of sizes.

The block is formed of shell portions comprising its faces or sides 2, 4, 5, 6, and 7, said shell portions closing these five sides, the sixth side 3 being partially open and constituting the only open side of the block. In the block body are formed voids 8, 9, 10, 11, and 12 and webs 13, 14, 15, 16, and 17. The voids 8 in the example shown are three in number, extend longitudinally of the block and are arranged in parallel relation to and in alternating arrangement with the webs 13 and portions of the sides 4 and 5 which are longitudinally coextensive therewith. The voids 9, 10, 11, and 12 and webs 14, 15, 16, and 17 are likewise arranged in parallel relationship and alternate in arrangement with respect to each other, adjacent webs being separated by an intervening void, but these voids and webs are arranged transversely of the block and at right angles to the voids 8 and webs 13.

The block 1, as stated, comprises in its whole or undivided state a building unit of oblong rectangular form and of a given standard size, but is divisible for the convenience of the mason or bricklayer into a plurality of sections of smaller sizes and of the same or different shapes suitable for the various purposes for which separately formed and independent blocks or tiles have heretofore customarily been employed.

70 This is obtained by a novel and peculiar construction and arrangement of portions of the block allowing the block to be readily divided along certain lines to produce desired sub-form fractions. All the voids, as shown, open through one side or face only, i. e., the bottom side or

face 3, of the block. The voids 11 and 12, however, are of greater depth than the voids 8, 9, and 10 and terminate at their upper ends just below the top of the block. Formed in the top of the block and intersecting the upper ends of the voids 11 and 12 are narrow fracture line slits 18 and 19 extending transversely of the block the major portion of its width, and in the sides of the block are formed fracture grooves or kerfs 20 and 21 arranged in alinement with each other and with said voids and slits. In the top face of the block are also formed L-shaped slits 22 and 23 the main portions of which extend from a point adjacent the block end 6 to a point in proximity to the slit 18, at which latter point the inner ends or short limbs of said slits 22 and 23 extend at right angles respectively toward the respective sides 4 and 5 of the block. In the end 6 of the block are formed fracture grooves 24 and 25 arranged in alinement with the longitudinally extending portions of the slits 22 and 23, and in the sides 4 and 5 of the block are formed fracture grooves 26 and 27 arranged in alinement with the transverse portions of said slits 22 and 23. The slits 22 and 23 are disposed on opposite sides of the longitudinal center of the block and intersect the two outer voids of the row of voids 8. The void 12, slit 18 and grooves 21 are located at the transverse center of the block and the void 11, slit 19 and grooves 20 equidistantly between the same and the end 7 of the block, so that the portions of the body block may be separated into block divisions at these points along transverse lines, while the outer voids 8 and the slits 22 and 23 intersect the same are arranged to permit portions of the block body lying between its transverse center and the end 6 to be separated along longitudinal lines. Each side face 4 and 5 of the block is provided on opposite sides of its transverse center with mortar receiving recesses 28 and 29, and the ends 6 and 7 of the block are formed with similar recesses 30 and 31. These recesses are arranged to produce at the corners and transverse center of each side of the block shoulders 32, the shoulders having ledges 33 on their sides facing the grooves 28 and 29. Figs. 3a and 3b show a modified form of block 1a in which V-shaped kerfs 22', 23' are employed in place of the slits 22, 23, which kerfs intersect at their ends the kerfs 26 and 27 but are separated from the associated voids 8 by intact wall portions sufficiently thick to prevent undue weakening of the face 2 in their regions, but sufficiently thin to allow ready fracture of the block along the lines thereof when a proper fracture blow is struck, as hereinafter described.

It will be observed from the foregoing description that the six-sided block disclosed has but a single open or mainly open side, namely, the side 3 through which the open ends of the voids 8, 9, 10, 11, and 12 extend, the sides 3, 6, and 7 being fully closed and the side 2 practically so, since the center void 8 and voids 9, 10 terminate short of this side of the block and the only perforations in such side of the block are those formed by the narrow slits 18, 19, 22, and 23, which are not wide enough to allow mortar to enter the voids therethrough. This construction allows the open side 3 of the block in building a ceiling or wall to be placed so as to be closed against the entrance of mortar into the voids against an abutment wall or the side of another block, all remaining sides of the block being adapted to be mortared without liability of pene-

tration of the mortar into the voids of the block. By this means a block of greater strength is provided while at the same time the necessity of using falsework or closures to close exposed voids against the entrance of mortar thereinto is avoided, thereby reducing time and labor in a building operation.

Figs. 8 to 20, inclusive, show the block proper and the many forms in which it is divisible to suit all general requirements. In Fig. 8 the whole block is shown, which is usable as such as a standard block or major unit A. By one or more deft blows of a hammer, trowel or other suitable tool the workman may clearly separate this block along the provided fracture lines to produce any of the various major or minor subforms required. Fig. 9 shows the block divided along the lines 23, 27 to form a modified major unit A' having a left hand recess *a* at one end and at the same time produce a small angular or L-shaped left-hand bonding, facing or like block or tile *b*. Fig. 10 shows the block divided along the lines 22, 26 to produce a major unit A2 having a right hand recess *a'* at one end and a small angular or L-shaped right-hand bonding, facing or like block or tile *b'*. Fig. 11 shows the block divided along the lines 22, 23 to produce a major unit A3 having a tongue projection *c* and right and left corner blocks *b, b'*. Figs. 12, 13, 14, and 15 show three-quarter block units A4, A5, A6, A7 from which divisions have been made according to Figs. 8, 9, 10, and 11, which three-quarter form is produced by division of the block along the transverse fracture lines 18, 20. Figs. 16 to 19, inclusive, show, in Fig. 16, two half blocks A8, A9 produced by division of the master block along the transverse fracture line 19, 21, and in Figs. 17, 18, and 19 further divisions A10, A11, A12, A13 of the half blocks A8 in accordance with Figs. 9, 10, and 11. Fig. 20 shows a group division of the master block into its component sections along the fracture lines referred to. From the foregoing it will be seen that the master block may be divided in such manner as to produce with the master block itself as many as sixteen different sizes and shapes of blocks or tiles suitable, in one size and form or another, for all the various purposes for which such blocks or tiles are used in ceilings, chimneys, walls, interior partitions and other parts of buildings in which bricks or tiles of this character are generally used. Also it will be seen that each block section or sub-form obtained as a division from the master block is complete in itself, each having one or more voids and webs or shell walls, the arrangement of the voids and webs being such that the webs in certain divisions form complementary shell walls to maintain the characteristic feature of a six-sided corner-shouldered block closed on five of its six sides, while in such divisions the void portion or portions along division line or lines produce a mortar receiving recess or recesses conforming to recesses 28, 29, 30, 31. Furthermore, in certain of the divisions the grooves or kerfs 20, 21, 24, 25 which remain serve as interlocks for a firm binding engagement between the block element and mortar.

An important feature of my invention resides in the fact that the sets of webs 8 and 13, 15, 16, 17, arranged respectively on opposite sides of the transverse center of the block, or in the portions divisible into the half block sections A8, A9, are disposed at right angles to one another. By this means the strength of the block as a whole is not only greatly increased, for the reason that

these differently arranged sets of webs adapt the block to better stand strains of different kinds falling thereon, but in the use of the blocks in wall and ceiling constructions, and particularly in the latter, the webs may be relatively arranged to adapt the blocks to be used as upper or lower pressure blocks or for obtaining negative or positive flexing moments. Another important feature of my invention is that the grooves 28, 29, 30, and 31 may be of sufficient depth to provide full mortaring spaces and, in those grooves provided with the kerfs 20, 21, 24, and 25, to secure a filling of these kerfs with the mortar and a resulting interlocking action with the mortar to more firmly bind the block in place. Still another important feature of the invention is that in all the main sub-divisions of the block the construction is such that block sections separated along the line of a particular void will be similarly grooved or channeled at the separated sides for the reception of the binding mortar.

The blocks are adapted when used in a ceiling construction to be employed in conjunction with joint closing or cover plates 34. These plates are preferably made of the same material as the blocks, and each plate 34 is of channeled form and comprises a body portion 35 having at opposite sides thereof upstanding flanges 36 provided at their upper edges with outwardly projecting supporting shoulders or ledges 37. In the formation of a ceiling one of these plates 34 is disposed so as to close the bottom of the mortar receiving channel or space between adjacent rows of blocks or tiles, so as to form a bottom support for the intervening filling or rib of concrete and to lie flush with the under-surface of the tiles and give proper continuity to the exposed surface of the ceiling. When so disposed the shoulders or ledges 37 of the joint closing plates rest upon the lower shoulders or ledges 33 on the opposed sides or ends of the blocks of adjacent rows. The described construction of the joint closing plate of a channeled form provides a pocket or trough 38 on its upper or flanged side for the reception of a portion of the concrete filling. As shown, the inner faces of the plate flanges may be undercut, as at 39, so that the concrete received in the dovetailed pocket or trough so formed will interlock therewith, thereby holding the plate firmly in position and firmly bound to the juxtaposed rows of blocks or tiles. The cover plates may be of the same length as the tiles or of double that length for better use in certain building operations. Their width may vary optionally according to the distance the rows of blocks are designed to be placed in the building structure.

In the block structures above described the block half A8 is shown as provided with three voids. This number may be increased or diminished by regulation of the widths of the voids. Fig. 23, for example, shows a block 1*b* in which the block half A8 is provided with two voids, its structure being otherwise the same as blocks 1 and 1*a*.

Figs. 24 to 30, inclusive, show some of the many and various ways of employing the blocks and joint closing tiles in ceiling constructions. Figs. 24, 25, and 26 show a ceiling structure C in which rows of the full blocks are horizontally disposed, or placed lengthwise in a horizontal position, the spaces between adjacent rows being closed by the joint plates and concrete fillings D, which concrete fillings may be suitably reinforced. The blocks in each row are also shown as arranged in staggered relationship to each other and with

respect to the blocks of adjacent rows so as to produce offset interlocks between the same and the concrete fillings, whereby the component parts of the ceiling structure are more firmly bound together without the necessary use of a concrete or cement overlay. It will be observed that the blocks of a row are arranged so that the open sides of adjacent blocks of each row may abut and be thereby closed against entrance of mortar or other foreign materials, while at the same time the narrow slits in the slitted sides of the blocks are closed by adjacent blocks, and it will be obvious that where the end blocks of a row have their open sides facing outwardly these sides will be closed by adjacent abutment or partition walls. In the ceiling structure C' shown in Figs. 27, 28, and 29 the blocks are arranged in an upright position or endwise vertically to produce a ceiling of greater depth. With this arrangement the grooves in opposed faces of the blocks produce additional voids in the ceiling between the blocks, but otherwise this structure gives the same general results as that disclosed in Figs. 24, 25, and 26. Fig. 30 shows a ceiling structure C2 in which the blocks are also arranged in an upright position, but illustrates how by the use of the block formations shown in Figs. 9 and 10 an increased amount of space may be obtained between adjacent block rows for the reception of a T-shaped concrete filling D' when the use of a greater amount of concrete at any point is found necessary or considered advisable. In all the ceiling forms shown the bottoms of the blocks and the joint closing tiles give a finished effect to the ceiling surface and it is only necessary to apply a light facing of cement for the purpose of filling in grooves and kerfs to form a level finished surface at the top or floor line of the structure. The above illustrations in Figs. 23 to 30, inclusive, apply only to ceiling structures, but by the use of the blocks in unitary shape and divisions of the blocks into the subforms shown in Figs. 8 to 20, inclusive, all the particular block or tile forms commonly found necessary may be obtained for building abutment and partitioning walls and other parts of a building in a ready and expeditious manner and so as to save time and labor and effect greater economy in carrying out the building work.

In the construction of block 1c shown in Fig. 31 the voids 11 and 12 are provided with narrowed extensions 11a, 12a extending to points near the block faces 4 and 5, which allows the grooves 20, 21 to be dispensed with if desired, and as shown.

From the foregoing description, taken in connection with the drawings, the construction, mode of use and advantages of my improved building block and its applications will be readily understood by those versed in the art without a further and extended description. Blocks of this character, in addition to the manifold advantages heretofore stated, may be manufactured by the use of conventional types of block pressing machines. While the constructions disclosed for purposes of exemplification are preferred, it will, of course, be understood that changes in the form, proportions and details of construction of the block other than those stated may be made within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is:—

1. A building block or tile of oblong rectangular form comprising a shell having side and end walls

and provided with voids and webs and coating weakened portions forming determined lines of fracture arranged for division of the block on a transverse line parallel with its ends into half sections and for subdivision of at least one of said half sections on an angular line arranged partially at right angles to and partially parallel with its ends into a plurality of sections, each section being of definite form to constitute a building unit.

2. A building block or tile comprising a shell of oblong rectangular form having two central transverse webs spaced to form a void and weakened surface portions arranged to form inchoate half sections and to allow ready fracture of the block transversely along the line of the void into half sections, the part of the block forming one of said inchoate half sections having spaced transverse walls parallel with the first named webs and forming a void and weakened surface portions allowing of its ready fracture transversely along the line of said void parallel with the first-named line of separation into sections forming quarters of the full block.

3. A building block or tile of oblong rectangular form comprising a shell having side and end walls and a central void and weakened shell surfaces in line therewith and relatively arranged to allow ready fracture of the block transversely along the line of the void into half sections, one of said half sections having voids and weakened shell surfaces allowing ready fracture of said half section along longitudinal and transverse lines on opposite sides of its longitudinal center to produce a central tongue portion and right and left hand corner block portions.

4. A hollow building block or tile comprising a rectangular shell having side and end walls and provided with sets of voids and webs arranged respectively on opposite sides of its transverse center, the voids and webs of each set being disposed in parallel relation to each other, the set of voids and webs arranged on one side of the center of the block extending in a direction longitudinally of the block and parallel with the side walls thereof and the set of voids and webs arranged on the other side of the transverse center of the block extending in a direction transversely of the block and parallel with the end walls thereof, the latter-named set of voids and webs including a void between adjacent transverse webs arranged substantially in line with the transverse center of the block and dividing the block into two transversely divisible half sections.

5. A hollow building block or tile comprising a rectangular shell having side and end walls and provided with sets of voids and webs arranged respectively on opposite sides of its transverse center, the set of voids and webs arranged on one side of the transverse center of the block extending in a direction longitudinally of the block and parallel with the side walls thereof and the set of voids and webs arranged on the other side of the transverse center of the block extending in a direction transversely of the block and parallel with the end walls thereof, the block being provided with weakened shell portions arranged in alinement with voids of each set and providing lines of fracture on which the block may be divided into component parts longitudinally or transversely of the block.

6. A hollow building block or tile comprising a six-sided rectangular shell having sets of voids

and webs, respectively arranged on opposite sides of the transverse center of the block, said voids opening at one end through one side of the shell and all of the voids terminating at their opposite ends within the plane of the opposite side of the shell, the latter-named side of the shell being provided with slits narrower than and communicating with the latter-named ends of some of the voids, said slits being of such reduced width as to render the ends of the voids with which they communicate substantially closed against entrance of mortar.

7. A hollow building block or tile comprising an oblong rectangular shell provided with sets of voids and webs on opposite sides of its transverse center, said voids opening at one end through one side of the block and terminating at their opposite ends within the plane of the opposite side of the block, the voids and webs of one set being arranged substantially on one side of the transverse center of the block and extending all in a direction longitudinally of the block and the voids and webs of the other set being arranged substantially on the opposite side of the transverse center of the block and extending all in a direction transversely of the block, the second-named side of the block being provided in alignment with voids of each set with slits communicating with the ends of the voids terminating adjacent to said side and being of materially less width than the width of the voids so as to substantially close such ends of the voids against the entrance of mortar, and kerfs formed in the sides of the block at right angles to the aforementioned sides in alignment with certain of the voids and said slits, whereby the block may be fractured along determined lines transversely and longitudinally of the block into component sections each constituting a building element.

8. A hollow building block or tile of oblong rectangular form and comprising a shell having bottom, top, side and end walls and provided with a set of voids and webs arranged transversely of the block at one side of its transverse center and parallel with the end walls and another set of voids and webs arranged longitudinally of the block at the opposite side of its transverse center and parallel with the side walls, a particular void of the first-named set being disposed at or near the transverse center of the block and particular voids of the second-named set being disposed one on each side of the longitudinal center line of the block and between said line and the respective sides of the block, said voids opening at one end through the bottom of the block, and weakened portions in the sides and top of the block in line with said particular voids along which and said voids the block may be divided into sections.

9. A hollow building block or tile of oblong rectangular form and comprising a shell having bottom, top, side and end walls and provided with a set of voids and webs arranged transversely of the block parallel with the end walls and another set of voids and webs arranged longitudinally of the block and parallel with the side walls, a particular void of the first-named set being disposed at or near the transverse center of the block and another particular void of said set being disposed between the first-named void and an end of the block, and particular voids of the second-named set being disposed one on each side of the longitudinal center line of the block and between said line and the respective sides of the block, said voids opening at one end through

the bottom of the block, and weakened portions in the sides, in one end and in the top of the block respectively in line with said particular voids of the first and second-named sets along which and the aligned voids the block may be divided into sections.

10. A hollow building block or tile of rectangular form having top, bottom, side and end faces and provided between its transverse center and one of its end faces with a plurality of transversely arranged voids and webs, said voids opening through the bottom face and extending therefrom toward and terminating near the top face, a particular one of said voids being disposed at or near the transverse center of the block and another particular void being arranged at a point substantially equidistantly between the aforesaid central void and the said end face of the block, the top face of the block having transverse fracture grooves or slits of less width than the said particular voids and aligned therewith and substantially closing the voids at such side against the entrance of mortar, and the side faces of the block having fracture grooves in line with the said voids and grooves or slits, whereby the block may be readily divided along the line of the first-named central transverse void into half block sections and transversely divided along the line of the second-named void into sections forming substantially equal divisions of that portion of the block in which said second-named void is formed.

11. A hollow building block or tile of rectangular form and having parallel top and bottom faces, parallel side faces and parallel end faces, and provided with a plurality of transversely arranged voids and webs, said voids opening at one end through the bottom face of the block and terminating at their upper ends adjacent to but below the top face of the block, said top face being provided with transverse fracture slits in line with and extending from said face toward the upper ends of at least some of the voids, said slits being of less width than said voids so as to substantially close the same against the entrance of mortar and said side faces having fracture grooves in line with the slits and voids with which the slits aline, whereby the block may be readily divided transversely into sections along the line of said voids.

12. A hollow building block or tile of rectangular form and having parallel top and bottom faces, parallel side faces and parallel end faces, and provided between its transverse center and one of its end faces with parallel longitudinal voids, one located on each side of its longitudinal center and between the same and the adjacent side face, the top face of the block being provided with similarly arranged fracture slits of less width than the voids and overlying the same and said end and side faces of the block having fracture grooves in longitudinal and transverse alignment respectively with the outer and inner ends of the respective slits, whereby that portion of the block between its transverse center and either side face may be readily divided from the remainder of the block.

13. A hollow building block or tile comprising a shell of rectangular formation and having transversely arranged webs forming a void located substantially at the transverse center of the block, other transverse webs spaced from the first-named webs and each other and arranged between the first-named webs and one end of the block and forming outer and inner voids and

an intermediate void, arranged between said center void and said end of the block, said center and intermediate voids being spaced to permit transverse fracture of the block along lines pre-determined thereby, said block having weakened face portions in line with said center and intermediate voids to facilitate fracture of the block along said lines into sections, the arrangement of the webs and voids being such that in any division of the block each section is formed with at least a single void and at least one of the void forming webs forms a face of the section.

14. A hollow building block or tile comprising a rectangular shell having a set of spaced transverse webs forming transverse voids located on one side of its transverse center, and having a set of spaced longitudinal webs forming longitudinal voids located on the opposite side of its longitudinal center, the first-named set of voids including a void arranged substantially at the

transverse center of the block and a void arranged substantially midway between the transverse center of the block and the outer end of that portion of the block in which said transverse set of voids are arranged, and said second or longitudinal set of voids including voids disposed equidistantly on opposite sides of the longitudinal center of the block and between its longitudinal center and the opposite sides of the block, the block shell having external weakening and fracture line determining portions in its top and side faces and in the outer end of that portion of the block in which the longitudinal voids are formed registering with said particularly located transverse and longitudinal voids whereby the block may be readily fractured transversely and longitudinally into sections along the lines of said particular voids.

ROBERT ZOETTL. 20