

July 17, 1951

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2,560,731

HOLLOW AND CHANNEL BUILDING BLOCK

Filed April 26, 1948

2 Sheets-Sheet 1

Fig. 1.

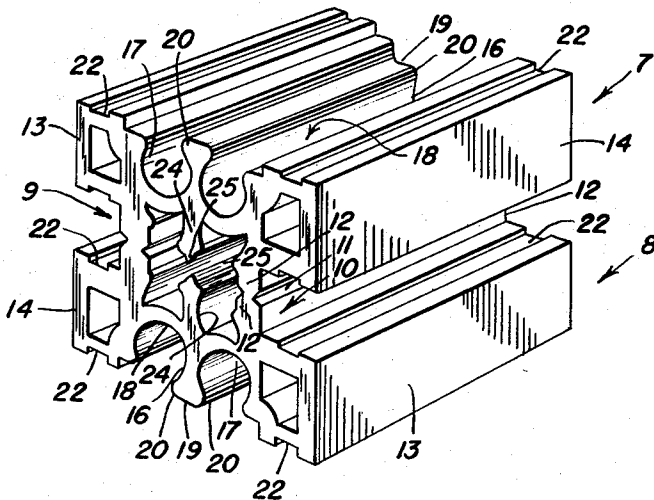
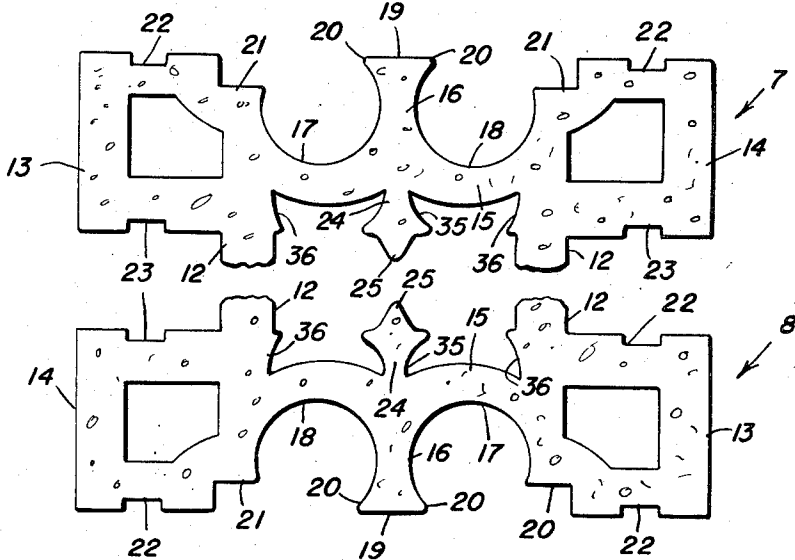


Fig. 2.



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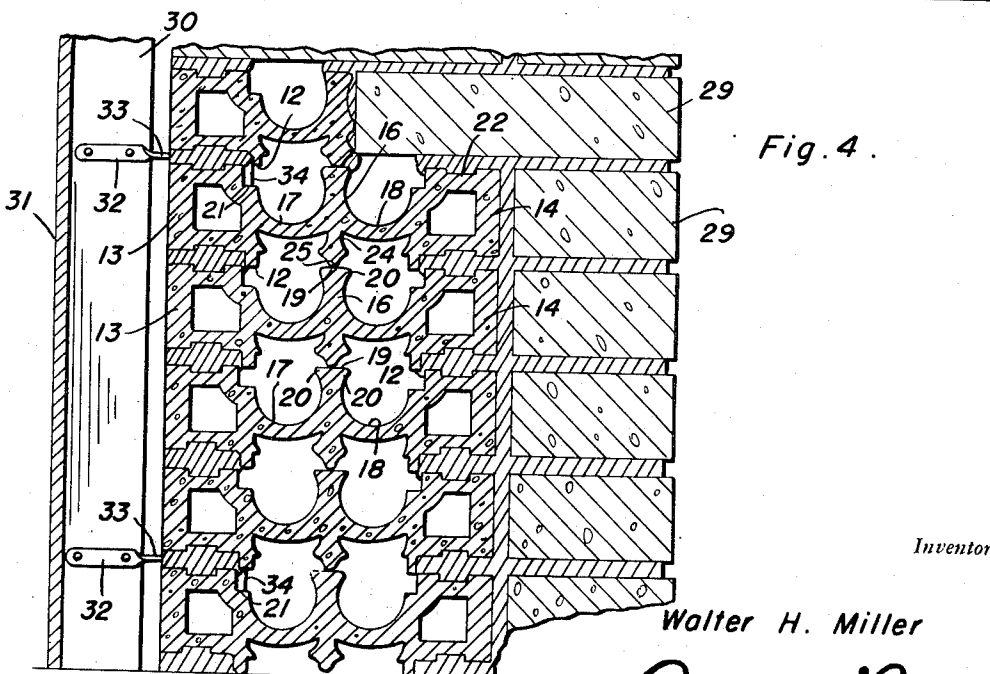
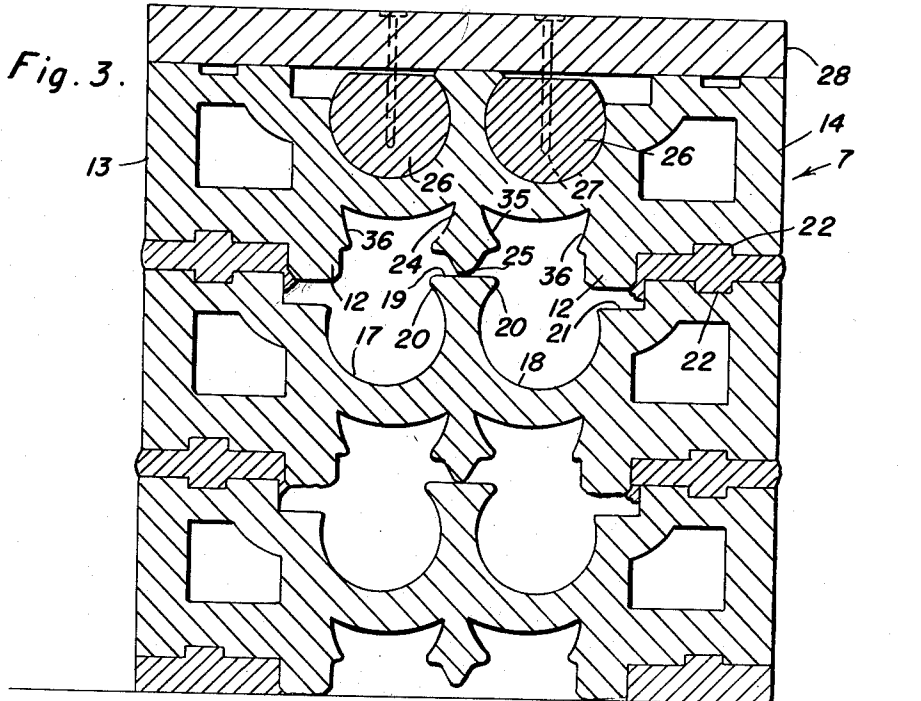
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UNITED STATES PATENT OFFICE

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HOLLOW AND CHANNEL BUILDING BLOCK

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4 Claims. (Cl. 72-41)

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This invention relates to the broad class of concrete structures and masonry walls of the types commonly known as dry walls, and has to do with, on the one hand, a speed wall and manner of constructing same and, in addition, com-
5 prehends certain new and useful improvements in novel dry wall units, such as tiles for back-up purposes and bricks for facing and equivalent purposes.

An object of the invention, cardinal in impor-
10 tance, is to provide a one-piece duplex unit, of the two-in-one variety, characterized by duplicate bricks which are connected with one another by frangible connecting walls, which may be severed by the mason, on the job, and then conven-
15 iently laid in the wall, the unification of parts serving to simplify manufacturing, while reducing costs and appreciably saving time and labor, in that both bricks may be handled at one and the same time.

More particularly, novelty is predicated upon the duplicated bricks interconnected, in spaced superposed parallelism, by readily separable walls, the unit being such that it includes handle means on its top and duplicate handle means on its bottom, making it convenient for the mason
20 to conveniently and accessibly grasp said handle means to facilitate the steps of separating the individual bricks, and then, locating and bonding same in the wall.

A further novel phase of the invention invokes the stated duplicate bricks initially unified in a duplex wall unit, which may be conveniently stacked, expeditiously handled by all concerned,
25 and which may be manufactured to minimize the likelihood of warping of portions of same, and in which the several jointing walls, which are centrally severable, divide themselves into flange-like mortar baffles which serve advantageously in a manner to be hereinafter more explicitly de-
30 scribed.

Another object of the invention is to provide an improved wall-constructing brick, either as an individual article ready for use, or as a com-
35 ponent of the stated dual unit, said brick being characterized by hollow parallel wall sections for load supporting purposes, connected by web means, the latter including a centrally located divider or partition which defines trapping and
40 drainage gutters and whose accessible edge portion has longitudinal beads defining practical and convenient hand-holds or hand-grips.

Another object of the invention is to provide a brick of the sort above mentioned, with a par-
45 tition in the space between the wall sections

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which, in conjunction with the web means, de-
47 fines channel-like gutters, the stated hand-holds, and in addition, functions as a line-up and position-
48 ing abutment in a manner to be hereinafter more specifically described.

A still further object of the invention is to pro-
49 vide a brick embodying principal components constituting the stated wall sections and gutter
50 defining web means adjoining the sections, the web means having the centralized partition pro-
51 viding the stated abutment, and said web means also having, on its opposite side, and in alignment
52 with the partition, a line-up and positioning rib, the rib on one brick matching and coinciding with
53 the abutment on the next-below brick to facilitate piloting the bricks into location in proper
54 courses and tiers for ready mortar bonding.

An additional object of the invention has to do
55 with a wall constructing brick, wherein hollow wall sections are interconnected by the stated
56 web means, with or without the partitions and ribs, the wall sections having longitudinally ex-
57 tending rabbets providing ledges to accommodate the mortar baffles, as well as laterally directed
58 terminal portions of anchors for furring strips.

In carrying out a preferred embodiment of the
59 invention, I provide a pre-formed wall unit in the nature of a block and embodying duplicate
60 parts which are described as bricks, these being connected in spaced parallelism by the afore-
61 mentioned frangible walls, portions of the walls constituting mortar baffles, the respective parts
62 embodying hollow body or wall sections connected by the stated web means, the web means having
63 outstanding partitions providing abutments and hand-holds, and inwardly projecting opposed ribs
64 providing the locating and positioning members, and the upper inner corner portions, forming the
65 outer bounds of the gutters, having angular grooves or rabbets providing the aforementioned ledges.

Other objects, features and advantages will be-
66 come more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a perspective view of the pre-formed duplex hollow wall unit, manufactured to in-
67 clude the features and advantages of my invention.

Figure 2 is an end elevation, showing the unit
68 separated into individual bricks or tiles.

Figure 3 is a vertical sectional view, showing the manner in which the bricks are laid in wall and showing how the drainage gutters may be used to accommodate wooden or equivalent strips or rounds for nailing a plate in position.

Figure 4 is a fragmentary sectional and elevational view, showing the invention used as a back-up tile in a wall construction and showing how the drop flanges, which serve as the mortar baffles, accommodate anchors for furring strips.

Referring now to the drawings by distinguishing reference numerals and referring particularly to Figures 1 and 2 and initially to Figure 1, the pre-formed unit, which may be visualized either as a block, rectangular tile or special brick assembly, is a one-piece structure and characterized by parts which may be conveniently referred to as individual bricks 7 and 8 respectively. These bricks are interconnected, in vertically spaced superposed parallelism, by spaced parallel connecting walls 9 and 10, each wall having its central opposite sides fashioned with score lines, which may take the form of relatively deep grooves 11 and which serve to render said walls fragile and thus, severable into flanges 12. Not only do these portions or flanges serve as components of the connecting walls, but they also serve as mortar baffles in a manner to be hereinafter described. Inasmuch as the respective bricks 7 and 8 are identical in construction, and despite the fact that they are shown connected into single block form in Figure 1, it is thought that it will clarify matters to refer to the identical elements and features by like reference numerals. It follows that each brick comprises a pair of principal substantive or body members which are conveniently referred to as hollow wall sections 13 and 14, and these have their inner opposed faces connected by web means 15. The web means is provided with a longitudinal central riser 16, which may be conveniently described either as a divider or partition. This divides the brick centrally to define substantially semi-circular drainage and condensation gutters 17 and 18, which are commonly found in so-called dry wall tiles and bricks. The outer crown edge of the partition is linearly straight and flat, as at 19, and provides a line-up and load equalizing abutment. The edge portions are formed into beads 20 which, in conjunction with the spaces provided by the gutters and partition, define novel, well-balanced hand-grips or hand-holds. Thus, the brick, as far as described, may be considered as novel and embodying hollow rectangular wall sections 13 and 14 connected in spaced parallel relation by curvate webs, the webs defining substantially semi-circular gutters and the gutters being separated by the partition, and the partition serving as a hand-hold and also as abutment means. Along the outer boundaries of the gutters, the sections 13 and 14 are grooved or formed with rabbets 21, which define mortar spaces and, also, ledges. It will be observed that the so-called top and bottom sides of the wall sections 13 and 14 are provided with channels 22 and 23, which serve as mortar accommodating key-ways. Referring to Figure 2 and to the structure beneath the web means, it will be seen that a runner or rib 24 is provided, and this constitutes a line-up, self-levelling and locating element which facilitates finding the correct position of the brick in the wall and assisting in guiding, gaging, laying and bonding the brick. The crown portion of the rib is substantially V-shaped and the vertex is rounded, as at 25,

to rest as a fulcrumming pilot on the abutment surface 19.

Novelty is asserted to exist, not only in the twin unit of Figure 1 and the individual bricks 7 and 8 in Figure 2, but additional novelty resides in the structures depicted in Figures 3 and 4. In Figure 3, for example, it will be seen that either brick is used, so that the gutters in the uppermost brick may serve to accommodate wooden rounds 26, which are slipped endwise into the gutters and which have flattened portions to accommodate nails 27, which serve to hold in place a wooden or equivalent joist supporting plate 28. Thus, novelty may reside in a wall construction having dry wall gutter means, wherein the latter serves to accommodate anchoring strips for nailing a plate or the like, in place.

Further novelty is seen in Figure 4, wherein the improved "bricks" are used in the capacity of back-up tiles. Here, the outer or facing bricks (standard bricks) are denoted by the numerals 29, and the bricks 7 and 8 are denoted by the same numerals already used in Figures 1, 2 and 3. The numerals 30 designate furring strips carrying wallboard or the like 31, and provided with metal anchoring brackets having end portions 32 secured in place and having twisted reaches or limbs 33, interposed between the bricks and having downturned terminals or hooks 34 secured in the stated rabbets or against the ledges 21.

The manner in which the bricks are assembled or laid in the wall is not new, and the mortar application procedure is customary, except that it will be seen that when each brick is laid, the fulcrumming vertex 25 rests upon the baffle surface 19 of the partition, and thus permits the mason to readily locate the position of the brick to be laid, and to line it up properly, after which the mortar is pressed into place and the brick is levelled up, during which procedure, the apron flanges 12 bridge the bonding spaces and thus serve as baffles, in the manner shown in Figures 3 and 4.

The width of the rib gages the size of the mortar joints as same will be pressed down firmly on the underlying abutment of the partition. This also levels the unit in the wall, as the rib rests directly on the partition and the latter supports part of the load, and the mortar baffles come into place and provide effective bonds. The wood nailing means eliminates the boring of holes in plates and, also, eliminates the use of toggle bolts and the like at door and window jambs. The mortar baffle means insures a tighter mortar joint and eliminates needless tooling of the mortar joints. The self-levelling and line-up means eliminates the use of a mason's line for each course of brick. After the first course is laid, it is necessary only to have a line several courses above the first one to insure a plumb and straight wall.

In practice, it is understood that the faces of the bricks 6 and 7 may be scored or the texture may be a smooth finish for ornamental results or whatever is required in a given job.

The bricks are eight inches square and two and a quarter inches in vertical thickness or height. The space between the respective bricks 7 and 8 is one and one-eighth inches. If desired, the surfaces 35 and 36 in Figure 2 provide additional curvate surfaces, to facilitate drainage of condensation. In fact, by placing the runner or rib 24 on the bottom of the brick 7 in Figure 2, it coacts with the surfaces 36 and the baffle flanges 12 in defining additional chan-

nels. In other words, I have channels in the top of the brick and channels in the bottom of the brick.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

Having described the invention what is claimed as new is:

1. A wall building brick comprising spaced parallel duplicate wall facing, load bearing and distributing sections, the latter being hollow and the top and bottom sides of said sections having mortar receiving and bonding channels, a horizontal web connecting said sections together, said web having a vertically upstanding partition midway between said sections defining drainage gutters, the outer crown edge of said partition being flat from end to end and serving as a load bearing and levelling abutment, said partition being formed along opposite vertical faces with outstanding longitudinally extending beads functioning as finger-grips, the inward upper corner portions bordering said sections being longitudinally rabbeted and providing clearance ledges, the underside of said web having a laterally depending longitudinally extending positioning, spacing, levelling and line-up rib, the latter being midway in respect to said sections and directly beneath said partition.

2. A wall building brick comprising spaced parallel duplicate wall facing, load bearing and distributing sections, the latter being hollow and the top and bottom sides of said sections having mortar receiving and bonding channels, a horizontal web connecting said sections together, said web having a vertically upstanding partition midway between said sections defining drainage gutters, the outer crown edge of said partition being flat from end to end and serving as a load bearing and levelling abutment, said partition being formed along opposite vertical faces with outstanding longitudinally extending beads functioning as finger-grips, the inward upper corner portions bordering said sections being longitudinally rabbeted and providing clearance ledges, the underside of said web having a laterally depending longitudinally extending positioning, spacing, levelling and line-up rib, the latter being midway in respect to said sections and directly beneath said partition, said sections being further provided on their undersides with depending longitudinal flanges spaced inwardly from the vertical outer faces of said sec-

tions and spaced outwardly from and situated parallel to said rib and serving as mortar baffles.

3. A wall building brick comprising a one-piece body comprising a horizontal web provided along opposite longitudinal edge portions with integral duplicate load supporting and bonding sections and provided intermediate said sections with a lateral longitudinally extending partition defining, between itself and said sections, open ended drainage gutters, the latter being substantially semi-circular in cross-section, the opposite longitudinal surfaces of said partition being concaved and merging into the web and forming portions of said gutters, and, in addition, providing bead-like finger-grips with the result that said partition may function as a handhold, the outer crown edge of said partition being wide and flat and providing a foundational abutment flush with the top surfaces of said bonding sections, the upper inward corner portions of said sections, opposite to the flat crown edge of said partition being rabbeted and providing mortar baffle flange clearance and accommodating ledges, and said sections also having, on their bottom sides, spaced parallel depending baffle-flanges, the latter directly underneath of said ledges.

4. The structure defined in claim 3, together with a rib depending from said web directly beneath said partition, said rib being a pilot, mortar space gaging and load supporting member and having its lowermost edge portion terminating on a plane above the lower edges of said baffle-flanges.

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