June 16, 1936. D. E. ROSS 2,044,637

BUILDING CONSTRUCTION

Original Filed Feb. 4, 1935 2 Sheets-Sheet 1

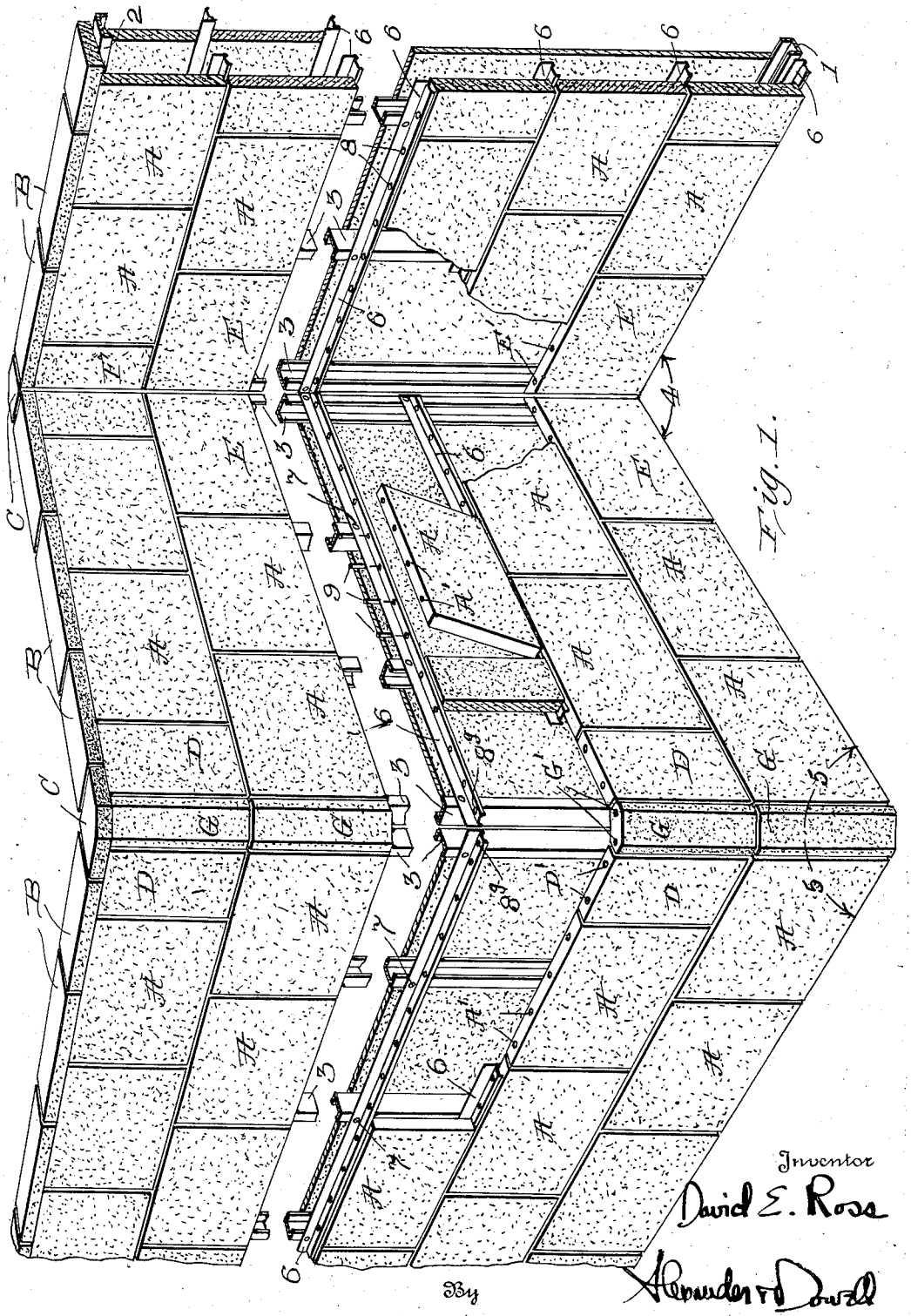


Fig. 1.

Inventor
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Fig. 2.

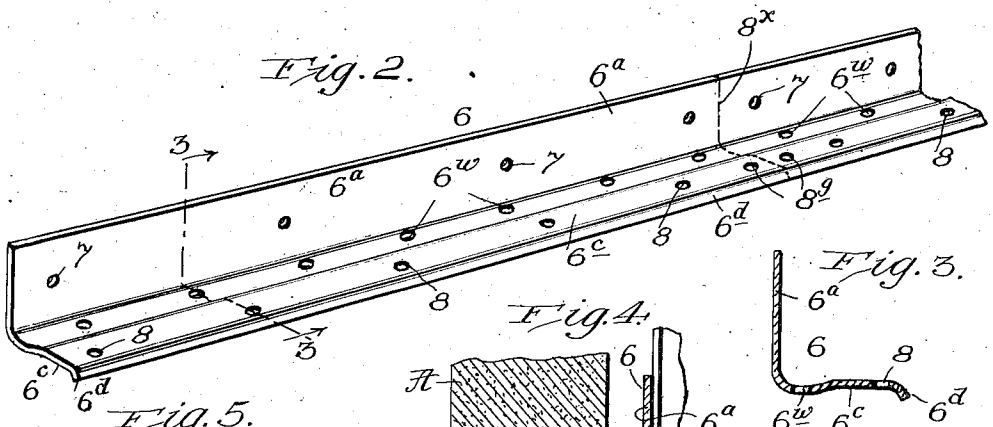


Fig. 3.

Fig. 4.

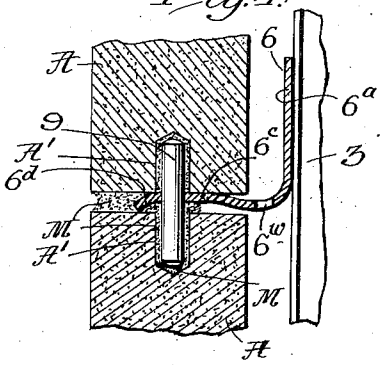


Fig. 5.

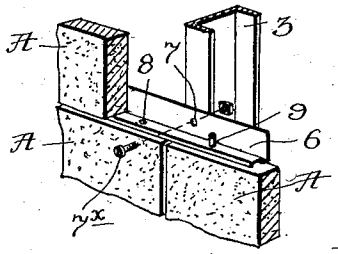


Fig. 6.

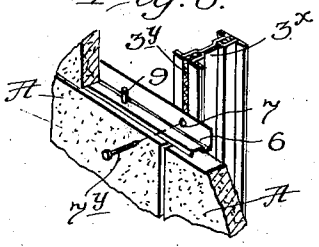


Fig. 7.

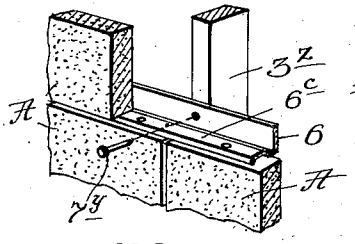


Fig. 8.

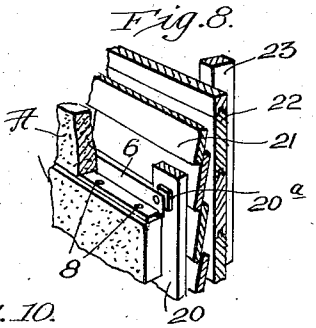


Fig. 9.

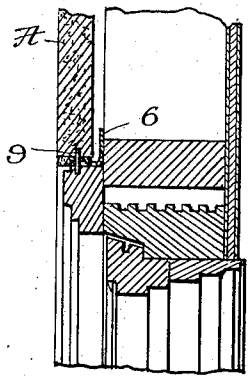
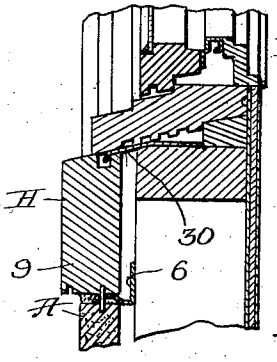


Fig. 10.



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UNITED STATES PATENT OFFICE

2,044,637

BUILDING CONSTRUCTION

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Original application February 4, 1935, Serial No. 4,963. Divided and this application November 29, 1935, Serial No. 52,225

4 Claims. (Cl. 72—19)

This invention relates to walls, buildings, or the like; and the principal object of the invention is to provide a novel prefabricated supporting member for attaching wall blocks of pre-molded blocks of stone or other materials to such walls, buildings, or other structures, whereby an architect by the use of stock pre-fabricated parts can design walls or buildings of various forms and dimensions, having various external appearances and finishes, and the blocks may be readily applied directly over the exterior surface of old walls or buildings without first removing the former surfacing, said stock parts being capable of being readily assembled and erected by unskilled labor.

The present application is a division of my copending application Serial No. 4,963 filed February 4, 1935.

To facilitate a full understanding of the novelty and utility of the invention I will explain the same with reference to the accompanying drawings which show the essential parts and features of construction. In the claims the novel features of construction and combinations of parts, for which protection is desired, are summarized.

In said drawings:—

Fig. 1 is a perspective view of a parapet wall having steel framing, and showing my novel prefabricated supporting members for the preformed blocks applied thereto.

Fig. 2 is an enlarged perspective view of a section of the pre-fabricated supporting member for the blocks, showing the punchings to accommodate the stud spacings, and also the punchings which register with the holes in the blocks.

Fig. 3 is a transverse section on the line **3—3**, Fig. 2.

Fig. 4 is an enlarged transverse section through the supporting member showing a typical horizontal joint between courses of blocks.

Fig. 5 is an enlarged perspective view showing the connection of the supporting member to the vertical wall studs of Fig. 1, and showing the blocks associated with the track.

Fig. 6 is a perspective view similar to Fig. 5 but showing the supporting members applied to a building having studdings formed with metallic nailing strips.

Fig. 7 is a perspective view similar to Fig. 6 but showing the supporting members applied to wooden wall studs.

Fig. 8 is a perspective view similar to Figs. 5, 6 and 7 but showing the supporting members applied to the exterior surface of an old building.

Fig. 9 shows a typical section through a transom head; and

Fig. 10 shows a typical section through a sill.

In Fig. 1 a wall is shown having a bottom plate **1** and an upper plate **2**, preferably both channel irons, connected by vertical studdings **3** which are also preferably channel irons connected together in any suitable manner. The wall section shown has an inside corner **4** shown at the right side of Fig. 1, and has an outside corner **5** shown at the left side. Both faces of the wall are covered with pre-molded blocks A to G, each course of blocks being supported upon longitudinally disposed pre-fabricated tracks **6** consisting of galvannealed angle bars provided with punchings **7** (Figs. 1 and 2) on their vertical legs to suit the spacing of the studdings **3**, and each track **6** being secured to the studding by bolts **7***x* (Fig. 5) or by rivets or the like.

The major portions of the courses are made up of the full-size regular blocks A, the half-size regular blocks D being utilized to effect the break-joint arrangement between adjacent courses. At the outside corners **5** of the wall are blocks G.

At the interior corners **4** the full-size blocks E or the half-size blocks F are used.

The coping consists of the regular coping blocks B; and at the corners, corner coping blocks C are used, the blocks B and C being provided on their undersides with holes to suit the spacing of the dowel pins **9** in transversely disposed straps (not shown) secured to the upper plate **2** and extending beyond the sides of the plate.

Figs. 2 and 3 show perspective and sectional views of track **6**. Each section of track is made about fourteen feet long but may be varied in length to suit the stud spacings, and has a vertical flange provided with the punchings **7**, and has a horizontal flange with a longitudinally disposed vertical offset portion **6***c*, the outer end of which is rolled downwardly as at **6***d* for purpose of determining the horizontal spacing between courses of blocks. The downwardly rolled or bent portion **6***d* of the horizontal leg of the tracks **6** not only determines the horizontal spacing of the courses of blocks but also clamps and secures the underlying blocks preventing vibration due to the frictional engagement of the sharp lower end of the portion **6***d* with the top end of the underlying block. In the horizontal flange, adjacent the vertical flange, are weep holes **6***w* spaced about six inches apart which allow any condensate which may collect on back of the blocks A—G or in the track to run down the wall to the foundation thus eliminating the danger

of freezing in the joints and of corrosion of the track.

In the offset portion 6c are spaced punchings 8 to suit the spacing of the holes such as A', D', E' (Fig. 1) in the upper and lower edges of the wall blocks A, D, E, F, G, which blocks are supported on the tracks 6 as hereinafter described. As shown in Fig. 4, the registering holes A' and punchings 8 receive dowel pins 9 which lock the blocks upon the tracks.

At intervals of about two feet, a pair of spaced holes 8g (Fig. 2) are punched in offset portion 6c of the track to accommodate the holes G' (Fig. 1) in the outside corner blocks G. A length of track which is to be cut to fit the outside corner of a building would be cut through the midpoint of a pair of holes 8g, viz. on the dotted line 8x (Fig. 2) and when the sections of the track thus severed are secured to the wall or studding the holes 8g will be aligned vertically with the holes G' in the upper and lower ends of the outside corner blocks G as indicated in Fig. 1.

In forming the wall the lowest track 6 is secured to the studdings 3, said track being provided with fixed dowel pins 9 projecting upwardly above the raised portion 6c, and the lowest course of blocks A, E, G, etc. are placed upon the lower track 6 with the pins 9 in the lower track entering the pre-drilled holes A'—G' etc. in the lower ends of the blocks. The next higher track 6 is then placed over the upper edges of the lower course of blocks, and the pins 9 dropped through the punchings 8 in the upper track and into the holes A'—G', in the upper edges of the lower course of blocks; and the upper track then secured to the studdings 3 of the wall. The above operation is repeated for all successive courses. Preferably a little mastic M (Fig. 4) is inserted in the holes A'—G' in the blocks to seal the pins in the holes. The pins 9 are of sufficient length to fill the registering holes A'—G' so that each pin will lock the upper ends of the blocks of a lower course and the lower ends of the blocks of an upper course to a track 6, as clearly shown in Fig. 4.

The track sections 6 may form a continuous support for the blocks over the window and/or door openings. Fig. 9 shows a typical section through a transom head; and Fig. 10 a typical section through a window sill. The window sill block H shown in Fig. 10 is substantially rectangular in shape, and preferably the lower face of the block is provided with holes for receiving the pins 9 of the tracks 6. The flashing 30 under the sill has its outer end bent downwardly and entering the longitudinal groove in the upper beveled edge of the sill block.

While Fig. 1 shows a wall of the parapet type, my invention is obviously applicable to other structures. Fig. 5 shows a typical house or building having channel iron studs 3. The exterior of the building is covered with the slabs A—G, as previously described, mounted upon tracks 6 securely bolted or riveted to the studdings 3 as at 7x, the tracks being provided with the same holes 8 (and 8g) for receiving pins 9 which enter the holes in the upper and lower edges of the blocks.

In Fig. 6 the tracks 6 are shown as applied to a building having studding 3x having cross-sections similar to I-beams formed by two channel irons of sheet metal secured together, back to back, by connections such as shown in my U. S. Letters Patent Nos. 1,986,980 and 1,986,981 dated January 8, 1935; and the I-beams 3x may be provided with metallic nailing strips 3y such as shown in my pending application Serial No. 754,508 filed November 23, 1934, for receiving and retaining the nails 7y which secure the tracks 6 to the studs 3x. The blocks A—G are supported in the tracks 6 and locked thereto by pins 9 in the same manner as previously described.

Fig. 7 shows the blocks A, etc., applied to a building having wooden studding 3z; and Fig. 8 shows the application of the wall blocks directly over the exterior surface of an old building. In this modification vertically disposed furring strips 20 are nailed or otherwise secured directly over the shingles 21 or other siding, or may be nailed directly over the sheeting 22 which is supported by the studs 23; and the tracks support the slabs A—H in the same manner as previously described. If desired, shims 20a may be used between the furring strips 20 and the tracks 6 where necessary for the purpose of vertically aligning the tracks.

The blocks A—H would be accurately drilled and furnished directly by the factory, as are also the accurately punched tracks 6; and it is therefore possible to ship from the factory finished material which may be erected quickly and easily with unskilled labor as great skill and care are not required on the part of the mason in erecting the wall.

The spacing of the pins and holes in the tracks and blocks is such that the vertical joints between blocks in the same course are automatically taken care of; and the horizontal joint between courses is automatically taken care of by the thickness of the track, the outer lip of the track being curved downwardly to engage the upper ends of the blocks of the lower course and to give the correct horizontal joint thickness; also the outer downwardly curved edge 6d of the track serves as a backing to prevent the mastic M or other packing from running backwardly in the joint between the stones.

The advantages of spaced relationship between pre-punched holes in the tracks, and pre-drilled holes in the blocks are that the shape of track 6 provides a horizontal joint of pre-determined thickness, and maintains a uniform horizontal joint, and adds to the strength of the supporting member; also the punching of track and the drilling of stone gives a smooth wall surface, and spaces the stone uniformly out from the wall, and gives a square and true wall which is accurate as to length and height. It is also an aid to the ease of erection in that the location of each block is predetermined; and the vertical joints are maintained uniform by the clearance allowed for the size of stone. Another advantage of my construction is that it is not necessary to sheath or cover the stud structure in order to obtain a means to fasten the block supporting members or tracks to the frame.

I claim:—

1. For a wall structure having a frame, a prefabricated wall block supporting track substantially L-shape in cross-section and having prepunched holes in its vertical frame engaging leg; the horizontal leg supporting the blocks and having a longitudinally disposed vertical offset portion for determining the width of the horizontal joint between courses; said offset portion having spaced pre-drilled holes therein.

2. For a wall structure having a frame provided with spaced studding, a pre-fabricated wall block supporting track substantially L-shape in cross-

section and having pre-punched holes in its vertical leg to suit the spacing of the studding; the horizontal leg supporting the blocks and having a longitudinally disposed vertical offset portion for determining the width of the horizontal joint between courses; said offset portion having spaced pre-drilled holes therein.

3. For a wall structure having a frame, a prefabricated wall block supporting track substantially L-shape in cross-section and having prepunched holes in its vertical frame engaging leg; the horizontal leg having a longitudinally disposed vertical offset portion for determining the width of the horizontal joint between courses and having spaced pre-drilled holes therein, and the outer edge of the offset portion being rolled downwardly to engage the tops of the blocks in the underlying course.

4. For a wall structure having a frame provided with spaced studding, a pre-fabricated wall block supporting track substantially L-shape in cross-section and having pre-punched holes in its vertical leg to suit the spacing of the studding; the horizontal leg having a longitudinally disposed vertical offset portion for determining the width of the horizontal joint between courses and having spaced pre-drilled holes therein, and the outer edge of the offset portion being rolled downwardly to engage the top of the blocks in the underlying course.

DAVID E. ROSS.