

Aug. 2, 1927.

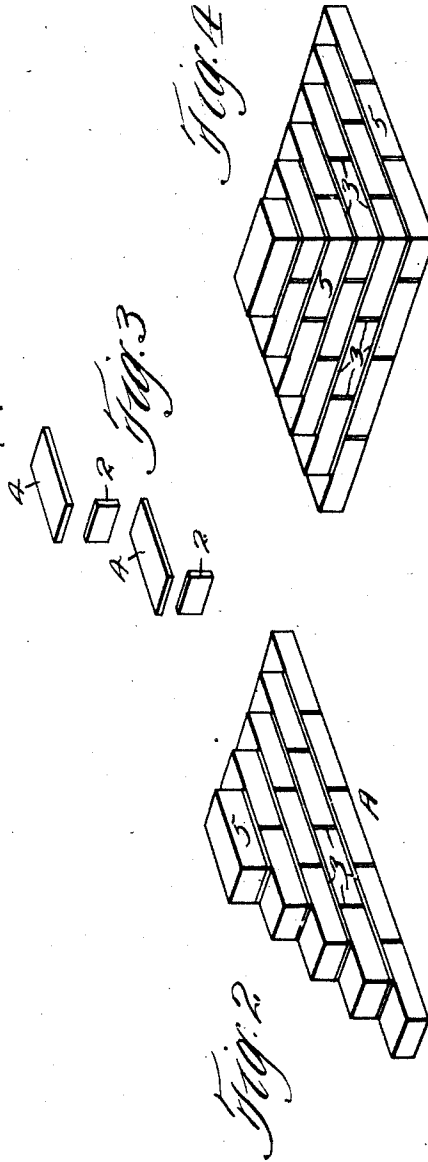
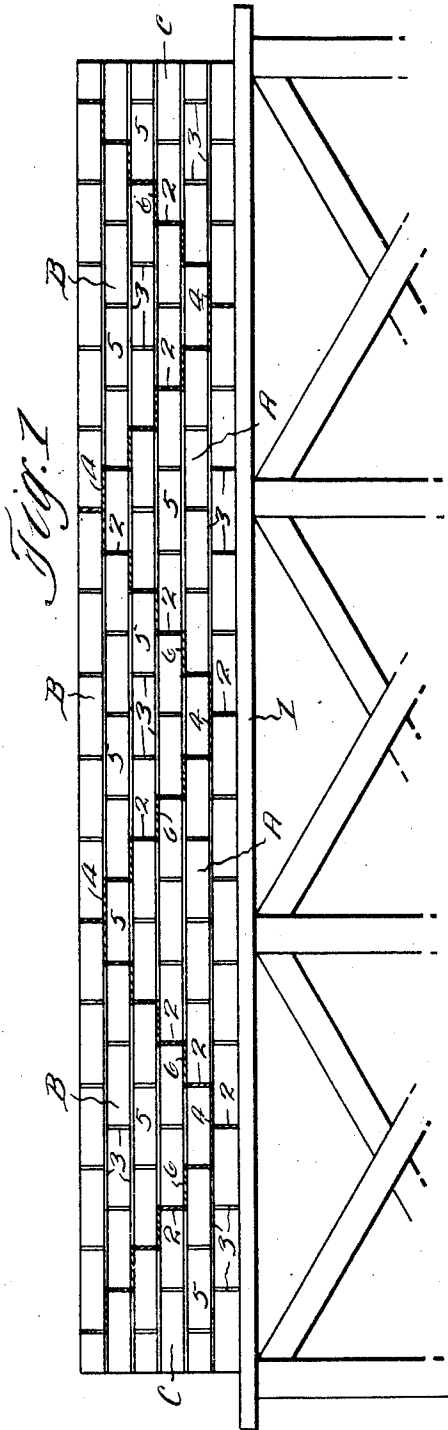
1,637,657

J. RIEGEL

WALL AND PROCESS OF CONSTRUCTING THE SAME

Filed May 25, 1923

2 Sheets-Sheet 1.



Inventor
Jacob Riegel,
BY Hull, Brock & West.
Attys.

Patented Aug. 2, 1927.

1,637,657

UNITED STATES PATENT OFFICE.

JACOB RIEGEL, OF LAKEWOOD, OHIO, ASSIGNOR OF ONE-HALF TO EMIL GREULICH,
OF CHAGRIN FALLS, OHIO.

WALL AND PROCESS OF CONSTRUCTING THE SAME.

Application filed May 25, 1923. Serial No. 641,316.

This invention relates to wall constructions, and has for its general object to enable a wall made up of bricks or similar blocks to be built in a particularly efficient and economical manner. By the use of my invention, I am enabled to proceed with the work of laying bricks or similar blocks into units or sections of a wall, which sections or units may, when convenient, be assembled "on the job", thus enabling the major portion of the work of general bricklaying to be carried on, irrespective of weather conditions, the assembling of the sections or units being conducted under ordinary working conditions as affected by the weather.

In the drawings, I have illustrated the manner of forming the units or sections and have shown also the manner in which these units or sections may be assembled into a wall. In said drawings, Fig. 1 represents an elevation of a table on which the work of building the wall sections or units may be conducted under shelter, the view showing some seven sections, each made up of a multiplicity of bricks; Fig. 2 represents a perspective view of one of the sections or units laid upon the table; Fig. 3 a similar view of some of the spacing strips interposed between the bricks of adjacent sections or units; Fig. 4 a view in perspective of a corner section or unit; and Fig. 5 a view in elevation of a part of a wall formed by assembling sections or units. In carrying out my invention, I employ a table 1, which may be of any desired length according to the length of the wall which is to be constructed; the size of the enclosure or shelter in which the work is to be performed; and the range of operation of the mechanism (where special mechanism is employed) for applying the cement-mortar mixture to the bricks.

In the drawing, the table is shown as of the same length as that of the complete wall which is to be constructed; although it will be obvious that a table shorter than such wall may be employed. The table is leveled and the lowermost course of bricks laid thereon in the usual manner, with the exception that, between certain bricks, spacing strips 2 (preferably of wood) are employed, the spacing strips being of the thickness of the cement-mortar course usually employed to unite such bricks. Assuming that two corner sections and five reversely tapered in-

intermediate sections are to be produced (as shown) the number of spacing strips will be as shown in the drawing and as explained in the detailed description following. The bricks not so spaced will be united by a strong cement-mortar, as indicated at 3. When the bottom course is laid, the next course will be laid upon the bottom course using not only the vertical spacing strips 2 but horizontal spacing strips 4, the spacing strips 4 being of the width and length of a brick, and separating certain bricks 5 in the second course from the bricks therebeneath in the first course. Three such strips 4 are shown.

In the third course, vertical spacing strips 2 will be used and, in addition, horizontal spacing strips 6, each of the length of half a brick, will be employed, in the manner indicated in Fig. 1. The remaining three courses will be laid in the same manner as the third course so that, when the six courses shown in Fig. 1 shall have been laid, there will have been provided two generally triangular sections or units A having their bases upon the table and three generally triangular sections or units B having their bases presented upwardly, each of the sections having five courses of bricks. In addition there will have been provided two corner sections or units C, each of the sides of each such section or unit being generally in the form of a right-angled triangle having its base defined by the bottom course.

The wall, or portion of a wall, laid upon the table will be formed in the usual manner, with the bricks or blocks of one course breaking joints with those of adjacent courses.

The bricks or component parts of each section or unit having been united by a strong cement-mortar, the sections can be handled in the same manner as molded concrete blocks, particularly since the bonds between the bricks or parts of each section or unit may be stronger than those used in ordinary brick-laying work.

In addition, in order to render the construction wind- and water-proof, the inner face of each block can and preferably will be coated with cement. This cement may be applied during the operation of building the wall sections upon the table, or it may be applied during the assembling of the sections or units on the job. When the cementing

operation is conducted at the latter place, the cement may serve to join the vertical courses of the wall.

When the cement-mortar has set and conditions are suitable for erecting a building or other wall from the units or sections thus prepared, the sections may be set upon any suitable foundation support. In Fig. 5, a preliminary header course D of bricks is laid upon the foundation 7, but this header course may be omitted, if desired, and the sections or units thus previously prepared may be applied directly to the foundation, which will be prepared to receive them. Whether or not the header course D is employed, a layer of strong cement-mortar (indicated at 8) will be applied to the support upon which the sections or units are to rest. One of the corner sections C will be applied in proper place and in proper manner; also the sections or units A, having the extended bases adapted to rest upon the cement-mortar course 8. Because of the use of the spacing strips 2, 4 and 6 in the preliminary work upon the table, proper spaces will be provided between the sections or units A and C for the reception of the cement-mortar at 9 which will unite the lower courses of such sections or units. The uppermost bricks and the vertical and horizontal sides of the steps of the sections A and C can also be coated with cement-mortar, as indicated by the black dot-and-dash lines at 9 and 10. The reversely arranged sections or units B may then be inserted in place, which, with the parts illustrated as shown in the drawing, will provide a continuous wall section six courses high.

The inner courses of the wall will be built in like manner and the inner and outer courses will preferably be cemented in the manner explained hereinbefore. The inner and outer courses may then be bonded together in any suitable manner, as by a header course of bricks, indicated at E. If desired, as where doors and windows are to be inserted in the wall, a soldier course F of bricks may be laid on top of the header course. However, for the purpose of bonding the inner and outer courses of the wall together, the header course E will be sufficient; and it may be replaced by any of the other forms of bonding devices, such as metal bonds.

In Fig. 5 I have shown the manner in which my invention may be adapted for filling in short spaces, such as those between the window 12 and door 13, where, because of such shortness of space, shorter sections or units G may be employed, and one of the sections A may also be shortened, as indicated at A'. Furthermore, the corner sections may be inverted, as indicated at C'. Also straight horizontally extending sections or units H may be used in short reaches, as

between the windows and doors, or between such windows and doors and the corners, the inner and outer courses of the wall being bonded together, if necessary, by such means as the header courses E', E". For the long stretches of wall, I prefer to use the triangular section or unit formation such as shown in Figs. 1, 2 and 3.

By means of my invention, I am enabled to make a wall comprised of brick or similar blocks by making pre-formed sections under cover, and afterward to assemble the same conveniently and efficiently, at the place of erection; and to provide a wall which will be of at least as great strength as walls erected in the ordinary manner and which will possess greater wind- and water-resisting qualities than such ordinary walls.

In the preferred manner of making my pre-formed wall sections or units, a large exposed surface is provided for each section or unit for the reception of the fresh bonding material by which the said sections or units are to be united, contributing to the ultimate strength of the wall.

By using a distinctively-colored mortar for uniting the sections or units and by suitable arranging, and (if desired) varying the shapes of, the sections or units, numerous mortar-outlined designs may be embodied in the walls formed by assembling the sections or units.

By the expression "wall" as used in the claims, I do not limit the use of my invention to ordinary extended walls, as it is obvious that it may be employed in the construction of shorter walls, such as the walls of pillars, chimneys, etc.

Having thus described my invention, what I claim is:

1. The method of building a structure of bricks or like blocks which consists in laying up courses of such bricks or blocks with spacers between certain bricks or blocks in each course and between certain bricks or blocks in successive courses, arranging such spacers whereby, in laying a plurality of such courses, reversely arranged triangular sections or units will be formed separated by such spacers from adjacent reversely arranged sections or units, and assembling and uniting such sections or units.

2. The method of building a structure of bricks or like blocks which consists in laying up courses of such bricks or blocks with spacers between certain bricks or blocks in each course and between certain bricks or blocks in successive courses, arranging such spacers whereby, in laying a plurality of such courses, sections or units will be formed having extended bonding surfaces separated by such spacers from adjacent sections or units, and assembling and uniting such sections or units into a wall.

3. The method of building a structure

from pre-formed sections or units of bricks or blocks which comprises laying a series of courses of such bricks or blocks, spacing certain bricks or blocks of each course in
5 such manner as to provide a plurality of removable sections or units separated by the thickness of the ordinary mortar course, and subsequently assembling such sections or units into a wall and cementing or suitably uniting the adjacent exposed edges of such
10 sections or units.

In testimony whereof, I hereunto affix my signature.

JACOB RIEGEL.