

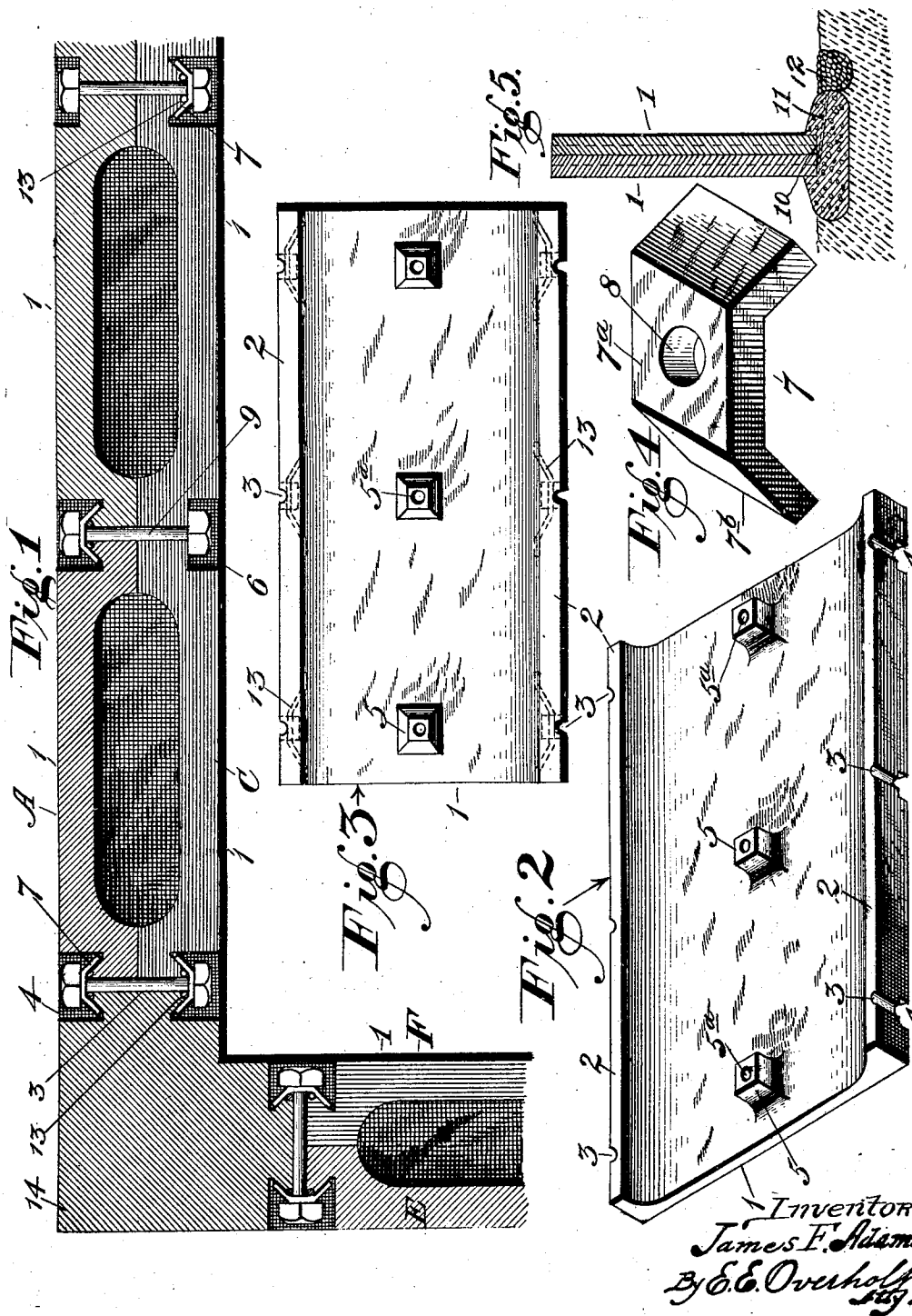
July 13, 1926.

1,591,948

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CONCRETE BUILDING SYSTEM FOR DWELLINGS

Filed Jan. 26, 1925



UNITED STATES PATENT OFFICE.

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CONCRETE-BUILDING SYSTEM FOR DWELLINGS.

Application filed January 26, 1925. Serial No. 4,925.

My invention relates to a system for forming concrete foundations and walls for buildings.

The object of the invention is to provide a system of this kind in which the wall may be formed of large slabs provided with means for firmly holding the same in operative relation to each other, and mounted on a foundation adapted to drain away any water that might percolate through the slab and make its way into the cellar of the building.

Another object is to provide for a construction which, while being thoroughly good, will yet be comparatively cheap, and will permit of the very rapid erection of the building with which it is employed.

Minor objects will appear in the subjoined description.

The invention consists in the novel construction of the parts, and their arrangement relatively to each other when they are assembled, as will be hereinafter described and claimed, reference being had to the accompanying drawings, in which:—

Fig. 1 is a horizontal section of a portion of a wall formed in accordance with my invention.

Fig. 2 is a perspective view of one form of the building slabs used.

Fig. 3 is a plan view of the inner side of one of these slabs, with its reinforcements shown in dotted lines.

Fig. 4 is a perspective view, on an enlarged scale, of the angle-clamp which forms an important part of my invention; and,

Fig. 5 is a sectional view showing the method of mounting the slabs on the foundation in the formation of a wall.

The numeral 1 indicates a slab used in the formation of the walls of the building. This slab is preferably recessed or channeled longitudinally on its inner side, thereby providing it at opposite sides with the flange 2, in which are formed the semi-circular recesses 3, which latter open at their outer ends into recesses 4 on the outer face of the slabs, and these recesses are arranged to register with the recesses in other slabs when the slabs are placed in position in the wall, so that the semi-circular recesses 3 when they register with each other in adjacent slabs form cylindrical openings between the slabs. The registering face-recesses 4 on adjacent blocks have their bot-

tom portions formed in planes inclined at right angles to each other, as clearly shown in Fig. 1. The slabs 1 are also provided on their inner channeled sides with studs or projections 5 which terminate in the same plane with the inner edges of the side flanges 2, and are provided with central openings 5^a which extend outwardly through the slab and open at their outer ends into the face recesses 6 (see Fig. 1) which are the same sized recesses as those formed at the meeting sides of adjacent blocks by the registering recesses 4.

Special attention is called to the angle clamp 7, consisting of the middle portion 7^a and the end portions 7^b disposed at right angles to each other, or 45 degrees to the middle section. Each clamp is provided with a central bore 8 for the reception of a suitable bolt 9, as shown in Fig. 1.

The foundation of the building is provided on its top side with a longitudinal recess 10 of a width to receive the slabs 1 on edge therein, and in the bottom of this recess extending downwardly and outwardly from the inner side thereof are a series of recesses 11 opening at the outer side of the foundation into a ditch 12 which surrounds the foundation, and is filled with gravel.

In operation, the slabs are set up opposite each other, one slab to form the inner wall, and the other the outer wall; or the outer slab only may be used, in which case it may be attached to any supporting frame or structure, for the purpose of forming a building wall.

It is when used as a basement wall or as a wall for the first floor above the foundation for a dwelling or small structure, that the groove or recess 10 is employed.

In erecting a building, it is best to begin at one corner, setting up the special corner post 14 (which is also provided in its edge and faces with the recesses 3 and 4 respectively just as are the slabs 1), and attaching thereto a regular slab 1, (also indicated by F in the drawings to distinguish it from other similar slabs in the wall shown in Fig. 1) and a half-section slab E, all with the bolts 9 and the clamps 7. It will be seen that the inclined ends 7^b of the clamps fit the inclined bottoms of the recesses 4, in such a way as to simultaneously bind the slabs E and F to the corner-post and to each other. When the slabs E and

F are attached to the corner post 14, then attach the half and full section slabs A and C respectively, at right angles to the first slabs attached. From these two starting
 5 points, full sized slabs are attached on both inner and outer faces until the next corner is reached where it is again necessary to place a half section on one face to even up the inner and outer walls where connecting with
 10 the corner post as it is reached.

The importance of the angle-clamp 7 becomes apparent, when it is considered that it makes it possible with a single bolt to draw the inner and outer slabs together,
 15 while at the same time bringing the abutting ends of the adjacent slabs also firmly together.

The reinforcements 13 are important, as they give the required strength at the points
 20 where the clamp pressure comes.

The edges and inside faces of the slabs may be coated with a moisture-proof material such as asphaltum, whenever deemed
 necessary.

The slabs may be made quite large, but whenever it is necessary to have more than one slab in height, the slab is provided at its ends with flanges the same as the flanges
 25 2 at its sides, and these additional flanges also have semi-holes and counterbores just the same as in the side flanges; and the joints are staggered horizontally as well as
 30 vertically.

Special sizes and shapes of slabs may be
 35 necessary where window and door frames come; but in any event, the same method of connecting the parts together is employed.

The projections 5, on the inner faces of opposing slabs abut the flanges on the opposite wall, and thus strengthen the slabs at
 40 their centres, while the channeling or recessing of the slabs on their inner sides forms air spaces between the inner and outer walls, and thus lightens the wall, while at the same
 45 time making it a fine non-conductor.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In devices of the character described, the combination in a wall, of opposing building slabs provided in their meeting edges with transverse recesses terminating at their
 50 outer ends in larger recesses in the faces of the slabs, the recesses in the edge of a slab being arranged to register with those in the edge of the adjacent slab, and being complementary thereto, the bottoms of the two
 55 parts of each complementary recess in the slab faces being arranged at an angle facing outwardly from each other; a clamp-plate for each complementary face-recess, said plate having its ends disposed at an angle to engage said angular bottom parts of the recess; and bolts passing through said
 60 transverse recesses into said face-recesses and

adapted to press said clamps into binding engagement with said angular recess bottoms, to draw each other the two slabs containing a complementary recess.

2. In devices of the character described, the combination in a wall, of opposing building slabs disposed in edge to edge engagement with each other and provided in their meeting edges with transverse recesses terminating at their outer ends in larger recesses in the outside faces of the slabs, the recesses in the edge of a slab being arranged to register with those in the adjacent meeting edge of the adjoining slab, and being complementary thereto, the bottoms of the
 70 two parts of each complementary recess in the slab faces being arranged at angles facing outwardly from each other; a clamp bent to engage each of said angular bottoms; and bolts passing through the registering transverse recesses of opposing slabs to draw said
 75 slabs toward each other, said bolts being also adapted at the same time to press the clamps into binding engagement with said angular bottoms; whereby the bolts not only bind
 80 the opposing slabs together but also simultaneously therewith press the meeting edges of adjoining slabs into abutting engagement with each other.

3. In devices of the character described, the combination with slabs arranged to fit in edge to edge engagement with each other, and provided with registering recesses terminating in larger recesses on the outer faces of the slabs, said larger recesses having inclined bottoms facing from each other at right angles, of clamp-plates adapted to be received into said larger recesses, and having their ends bent approximately at right angles to engage the angular bottoms of said
 90 recesses.

4. In devices of the character described, a flat face building slab having registering openings for securing-bolts and clamps co-operating therewith, said parts being arranged to simultaneously press the slabs in the direction of the longitudinal extent of the bolts and also to draw them toward each other in a direction at right angles thereto.

5. In devices of the character described, building slabs having their adjoining edges provided with transverse registering recesses terminating at their outer ends in enlarged recesses complementary to each other and having inclined bottoms facing outwardly from each other; and clamps on said bolts having their faces correspondingly inclined toward each other, to cooperate with said inclined bottoms of the registering complementary recesses to draw the slabs having
 115 said complementary recesses into abutting engagement with each other.

6. In devices of the character described, a building wall constructed of similar slabs held in face to face engagement with each
 120 125 130

other, one to form the inner side of the wall, and the other the outer side, said slabs being also provided with means for edgewise clamping engagement toward each other; 5 and corner posts for uniting two wall sections disposed at right angles to each other, the corner posts having securing means similar to the securing means for the slabs, whereby to draw each slab adjacent the corner post toward the post in clamping engagement therewith. 10

In testimony whereof I affix my signature.

JAMES F. ADAMS.