No. 716,029.

Patented Dec. 16, 1902.

S. GILETTI.

BUILDING CONSTRUCTION.

(Application filed July 17, 1902.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

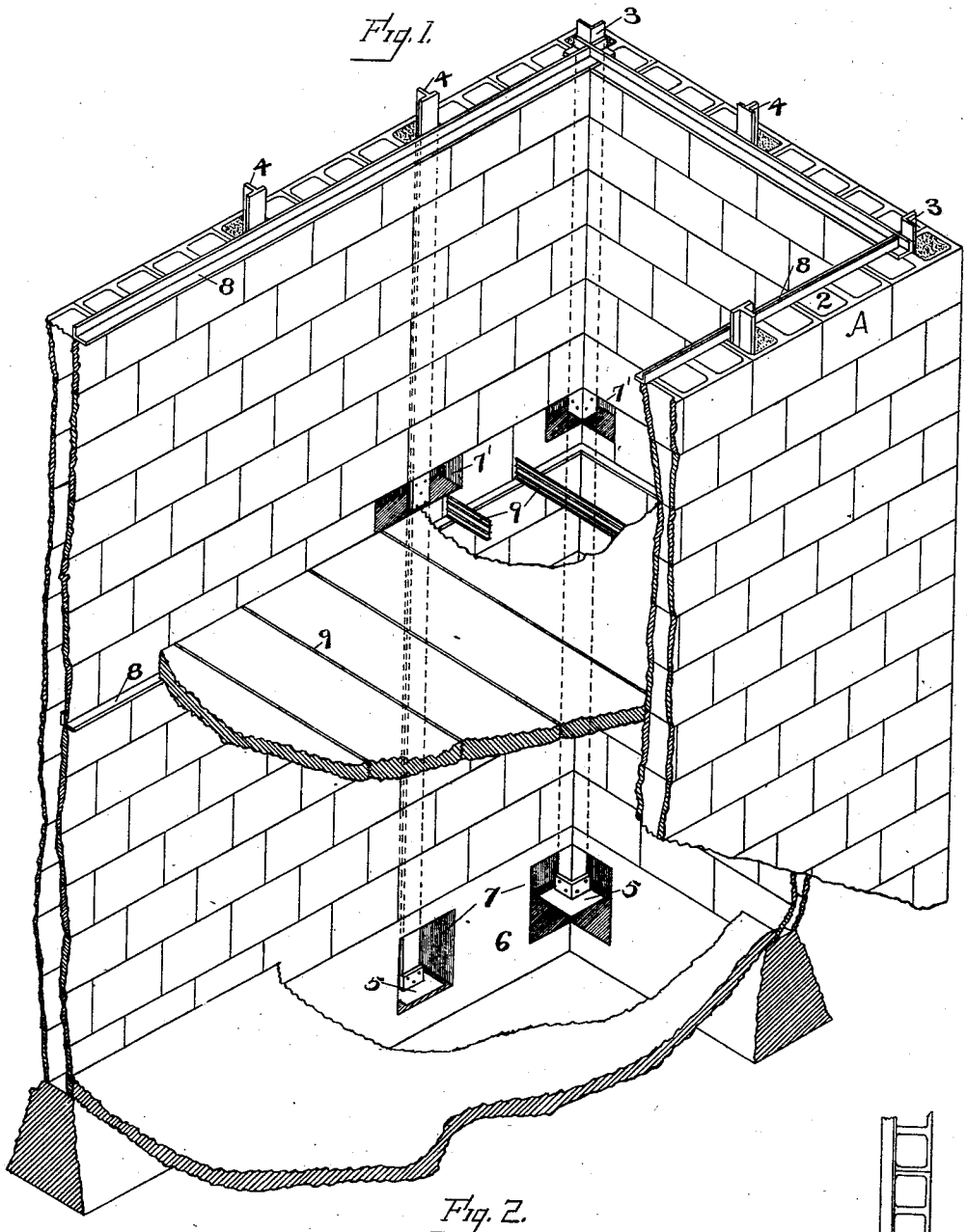


Fig. 2.

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Fig. 3.

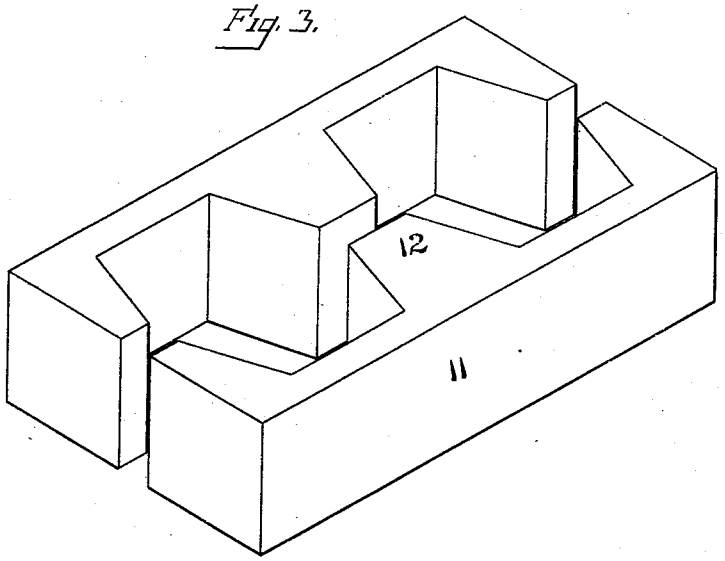
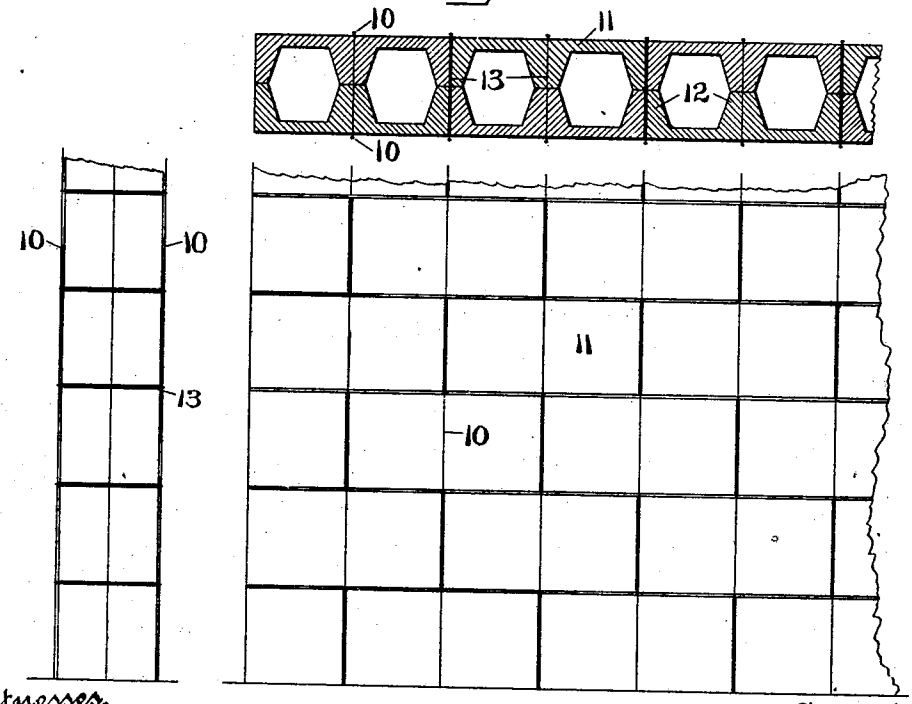


Fig. 4.



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UNITED STATES PATENT OFFICE.

SECONDO GILETTI, OF SAN FRANCISCO, CALIFORNIA.

BUILDING CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 716,029, dated December 16, 1902.

Application filed July 17, 1902. Serial No. 115,892. (No model.)

To all whom it may concern:

Be it known that I, SECONDO GILETTI, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Building Constructions; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in wall and partition construction and girder-supports in buildings of combination stone or brick and steel.

Ordinarily the metal frame of a building is put up first and the stone or brick walls are reared about and around the frame subsequently.

The object of my invention is to devise a form of construction in which the walls shall go up story by story in advance of the metal framework that is to bind the whole into a rigid structure.

The invention consists of the parts and the constructions and combinations of parts which I will hereinafter describe and claim.

Figure 1 is a sectional perspective of a building. Fig. 2 is a top view of a building-wall. Fig. 3 is a partition-block of interchangeable halves. Fig. 4 shows three views of a partition.

A represents a block element employed in my system of construction. It is preferably of artificial stone and is made with the openings 2 extending through it from top to bottom, so that when a number of these blocks are laid in courses to form a wall, as shown, the openings in one block will register with openings of overlapping blocks immediately above and below, and a series of vertical flues are formed in the wall. When the wall has advanced in construction to the first story or to such point at which a transverse horizontal partition is to be placed, I insert a series of metal columns into these flues at suitable intervals and bolt them at their lower ends to metal plates or blocks anchored in the foundation of the building, subsequently filling the flue-spaces about these columns with cement, concrete, or any other suitable binding material. Preferably angle-iron columns 3 are inserted at the corners and T-iron columns 4 inserted at intervals along the walls. These columns are then bolted to anchor-plates 5, secured in the concrete foundation 6. Access may be had to these anchor-plates for this purpose through openings 7 in the foundation. Attached to the columns 3 and 4 and projecting beyond the interior wall-surfaces are the horizontal angles 8, which support the transverse girders 9. Having placed the columns in position and riveted them to the anchor-plates, the openings 7 are plugged and the flue-spaces about the columns filled and packed with cement or concrete. The iron frame thus becomes part of the solid stone wall and an absolutely rigid structure results.

The girders may be of any suitable construction. Preferably they are such as are known as the "Columbian system steel bars," having a series of longitudinal lateral flanges which support the concrete in the spaces between the girders.

Having built the wall to the first floor and given it its rigid metal reinforcing-frame and surrounded the latter with cement, as described, the laying of the blocks is then continued to the second floor, whereupon a second set of metal angle and T columns are lowered into the flues continuous with those in which metal columns have already been introduced. Those second columns are bolted to the first, access being had for the purpose through openings 7′ in certain of the blocks in the course corresponding to the adjacent ends of the bars. These openings are then closed and the flue-spaces about this second section of metal frame packed with concrete, as before. Girder-supporting bars 8 are secured to the colums, as in the first instance, and the construction of the walls of the building proceeds story by story on to completion.

The flues unoccupied by the T and angle columns serve as excellent mediums for ventilating and heating purposes and also as pipe and wire conduits.

The walls and floors of the building completed, the transverse vertical partitions are then put in position. These partitions are preferably constructed as here shown. Two parallel lines of vertical wires 10 are strung between the floor and ceiling where a partition is to go. Between these wires the hollow blocks 11 are laid to form the partition-wall. Each block is made in two interchange-

able sections or halves, having the transverse spacing ribs or flanges 12 on their adjacent sides. The wires 10 are connected between each course by thin tie-wires 13, which serve to unite the block-sections firmly and to bind the whole into a rigid structure. The plastering is then laid over the exterior wall-surface, embedding the wires and giving a finished partition which is light, strong, shallow, and fireproof.

The blocks, which are of concrete, terra-cotta, or other suitable material, are preferably made in sections, as shown and described, for reasons of economy in manufacture and of difficulty in getting the blocks sufficiently thin otherwise.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination in a building-wall having a series of vertical flues therein, of metallic columns disposed at intervals in said flues, means for anchorizing the ends of said columns, said walls having openings affording access to the anchoring means and horizontal bars secured to the columns at intervals corresponding to floor-spaces.

2. The combination in a wall construction having vertically-disposed flues, of metallic columns inserted in the flues at the corners of the walls and at intervals along the walls, horizontally-disposed angle-bars secured to said columns upon which the floor and ceiling girders may be supported, anchor-plates, and means by which access may be had to the latter for the purpose of securing the columns to said plates.

3. A building construction consisting of a wall with vertical flue-spaces, angle-iron columns inserted into said spaces at the corners of the walls, T-columns inserted at intervals in the flues intermediate of said angle-columns, anchor-plates to which said columns are secured, openings in the walls through which access may be had to said plates and columns, and bars connecting said columns at floor or ceiling space intervals and affording a support for the girders.

4. A building-wall construction comprising tubular blocks laid in courses so as to have their openings disposed to form a series of vertical flues, metal columns inserted at intervals in these flues, anchor-plates to which said columns are secured and means upon these columns projecting beyond the interior wall-surface by which the floor and ceiling girders may be supported.

5. The combination in a building structure of a wall composed of hollow blocks laid in courses to form a series of vertical flues, metallic columns in certain of said flues and having their bases secured in the foundations, floor and girder supports on said columns and a cement or like filling in the flue-spaces surrounding said columns, said wall having formed in it openings affording access to the bases of the columns.

6. A building construction in which the stone and metal structure proceeds successively story by story, said construction including walls of hollow blocks of artificial stone or the like laid in break-joint courses, metal columns inserted at intervals in the flues so formed in said walls, means for securing the ends of said columns, and a filling of cement or like material embedding said columns in their respective flues.

7. In a building construction, a hollow-block element consisting of two matching and interchangeable sections each having spacing ribs or flanges to abut, substantially as described.

In witness whereof I have hereunto set my hand.

SECONDO GILETTI.

Witnesses:
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JESSIE C. BRODIE.