

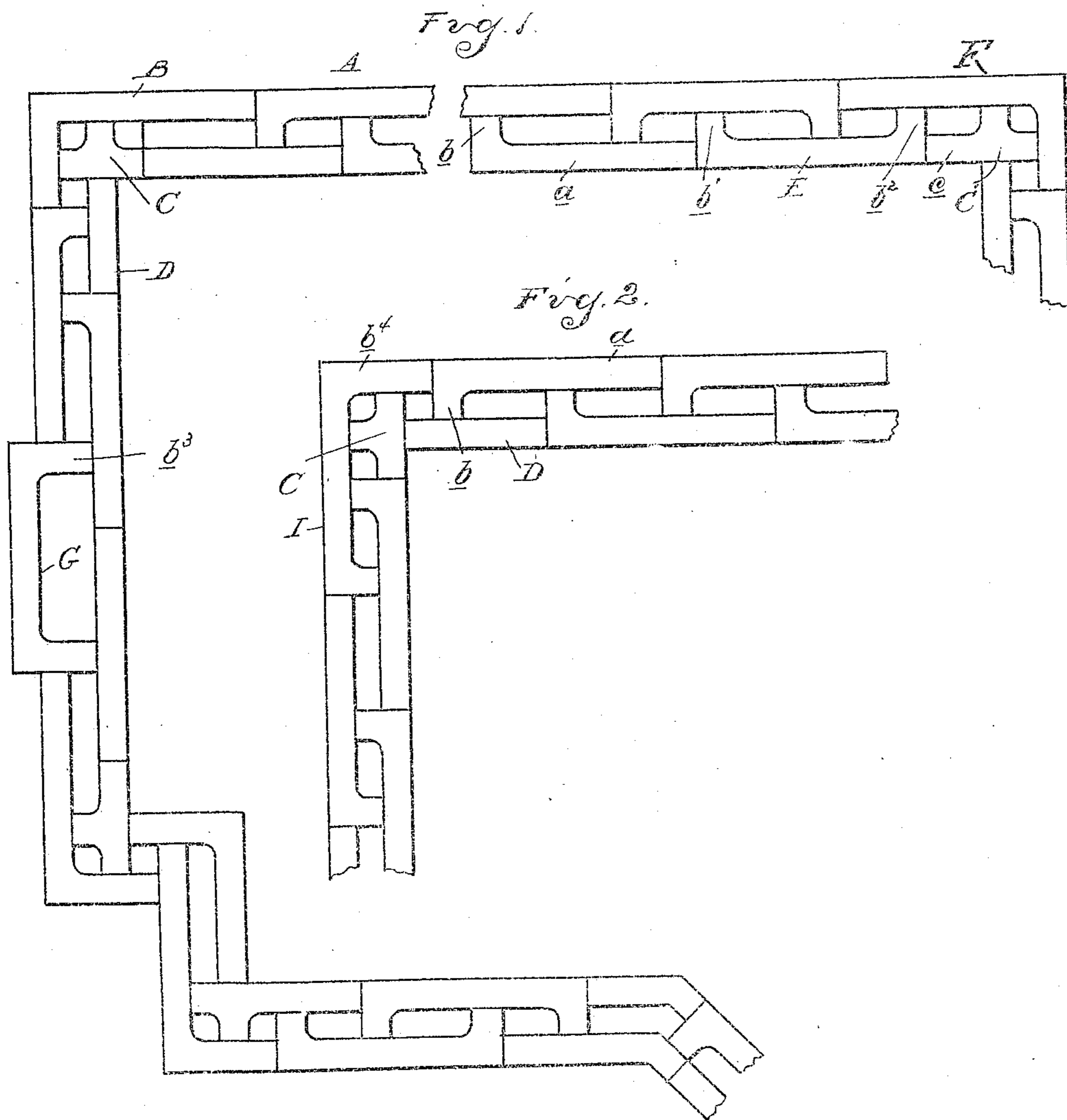
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PATENTED MAY 8, 1906.

C. A. CHAMBERLIN.
BUILDING WALL.

APPLICATION FILED APR. 10, 1905.

2 SHEETS—SHEET 1.



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No. 819,979.

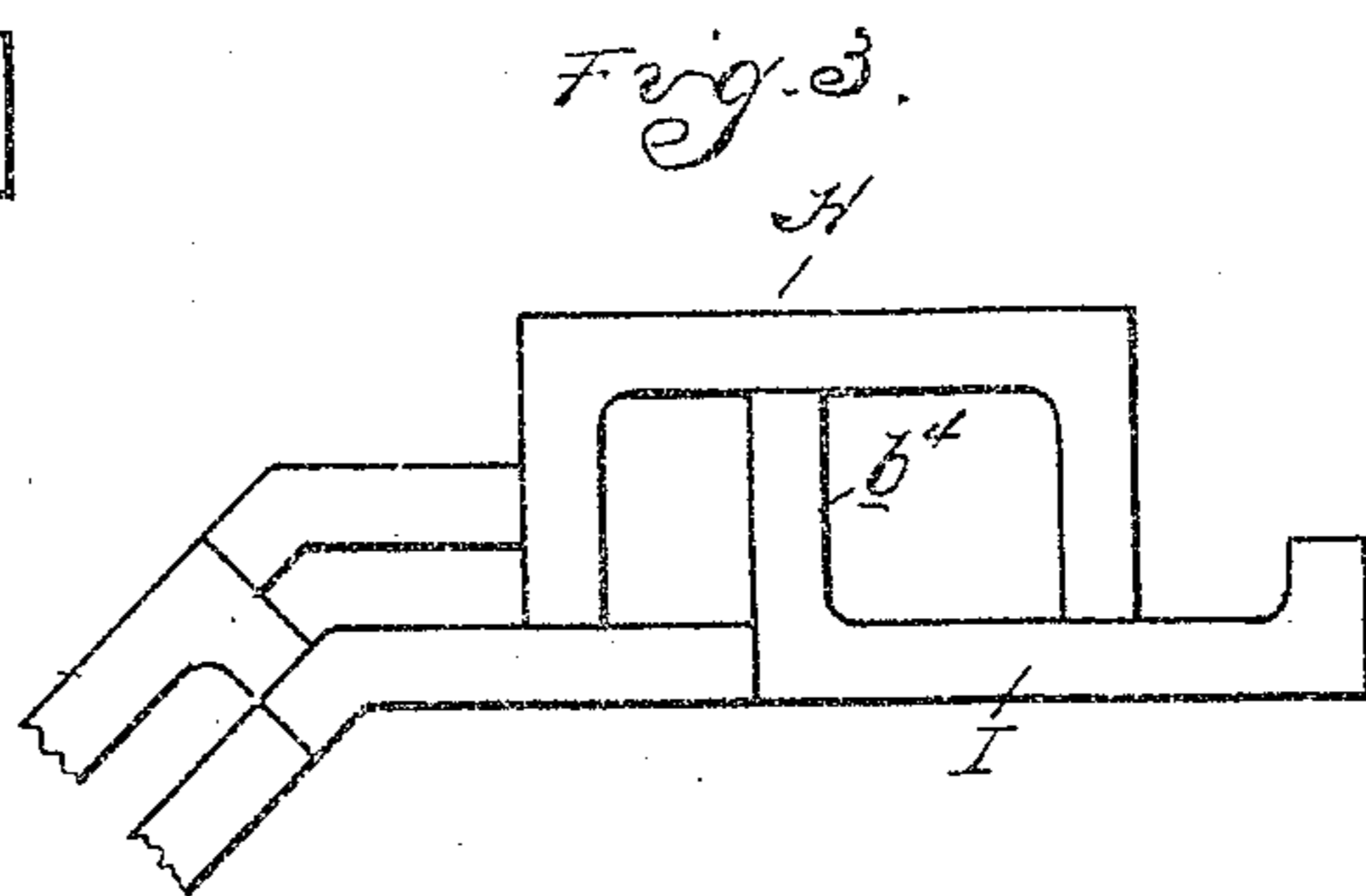
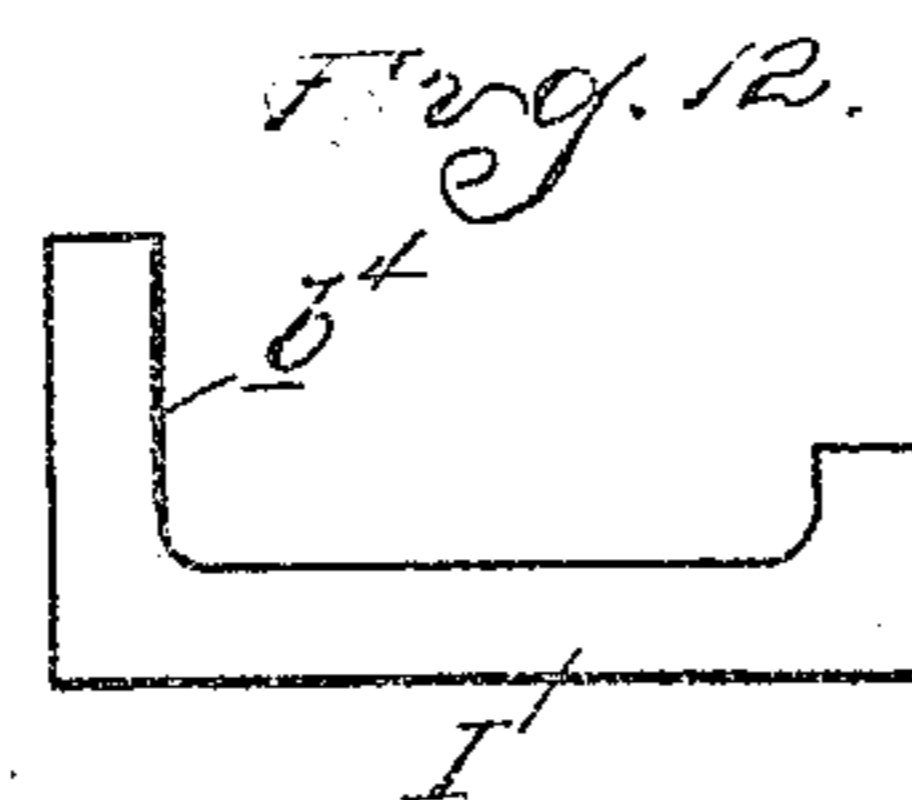
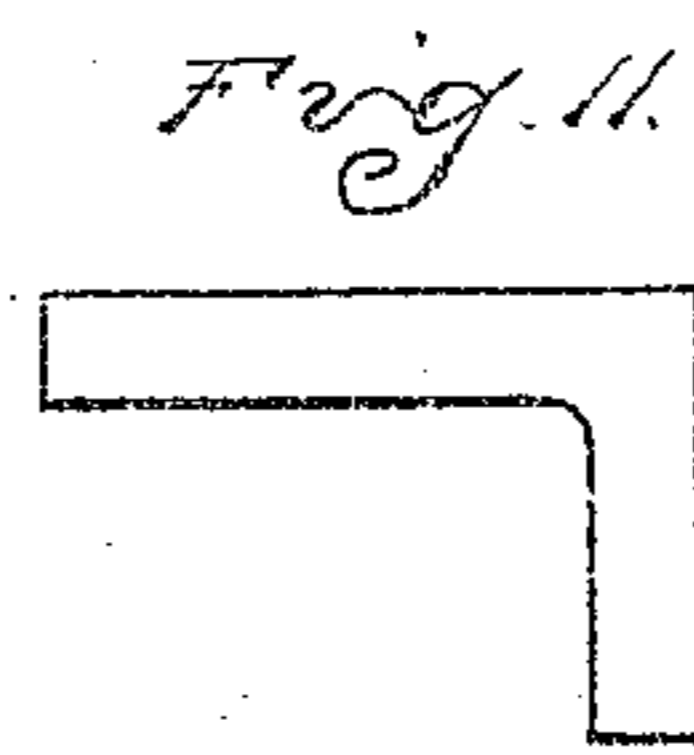
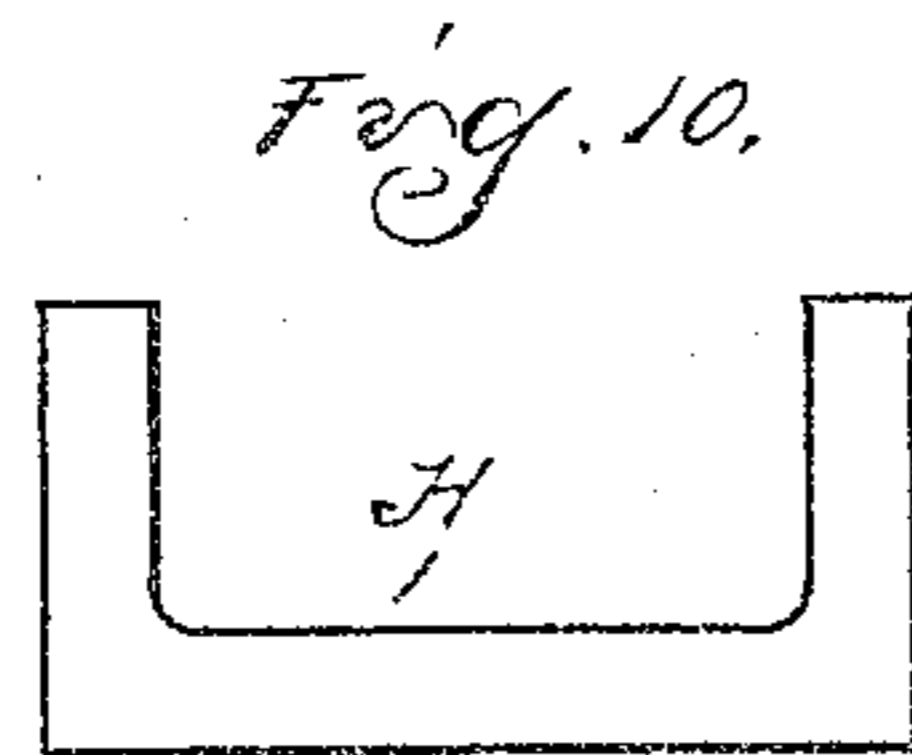
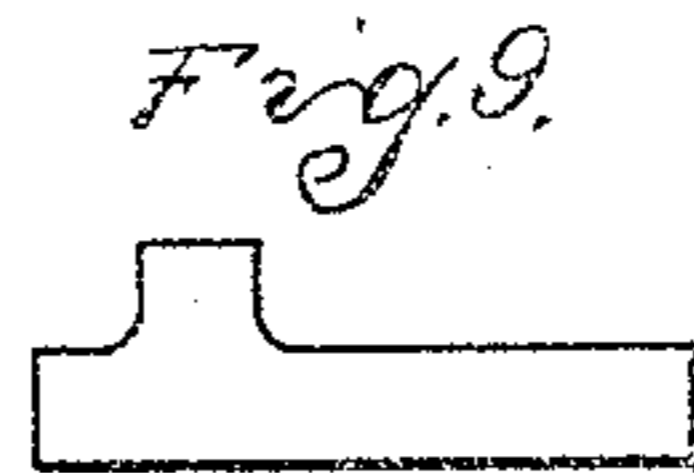
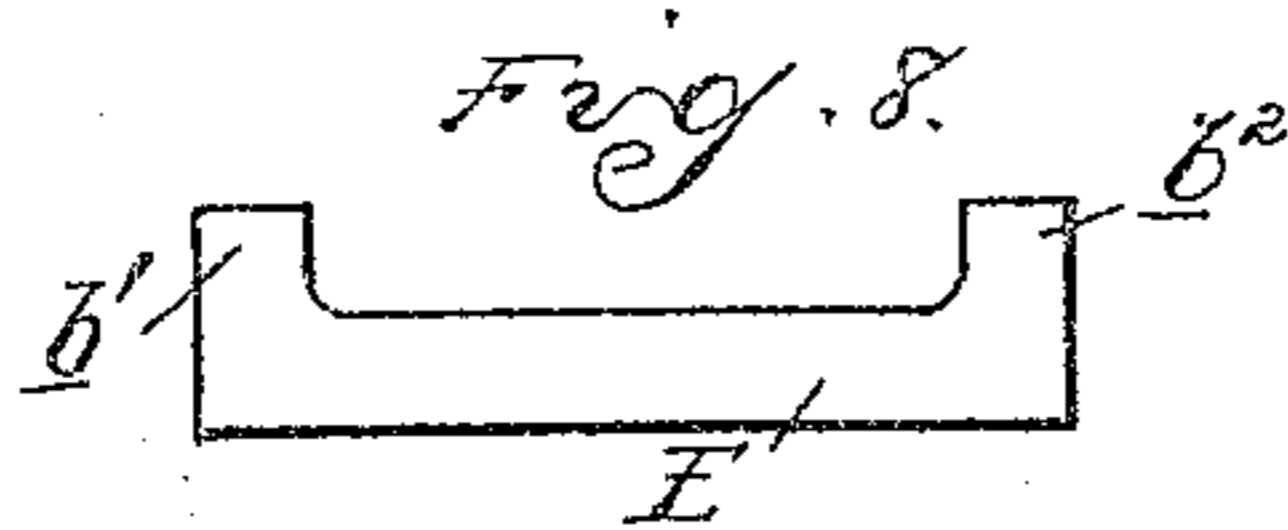
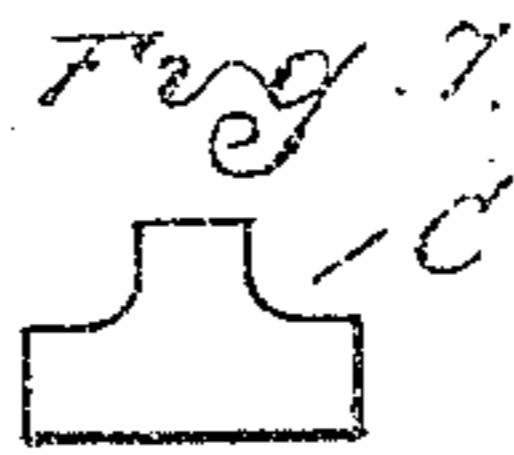
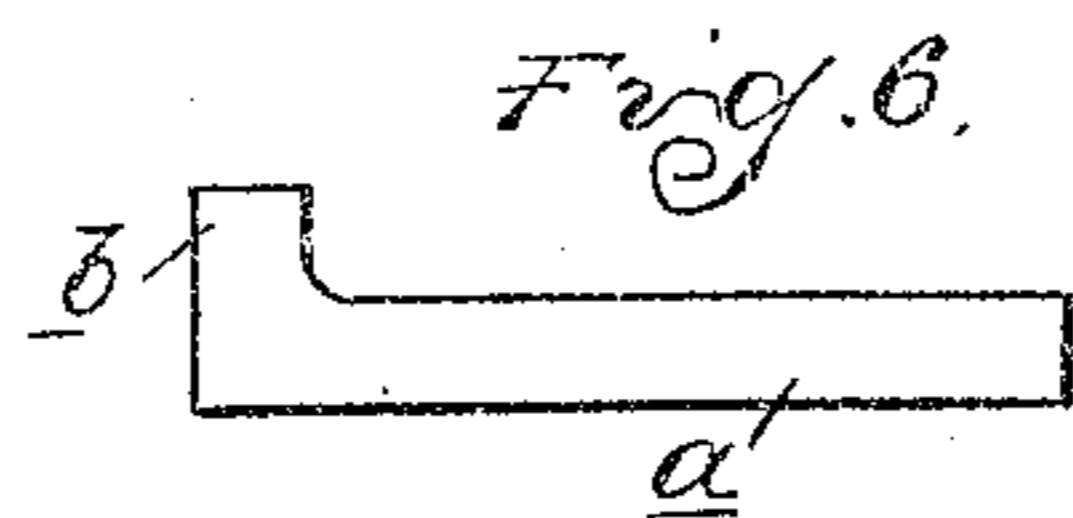
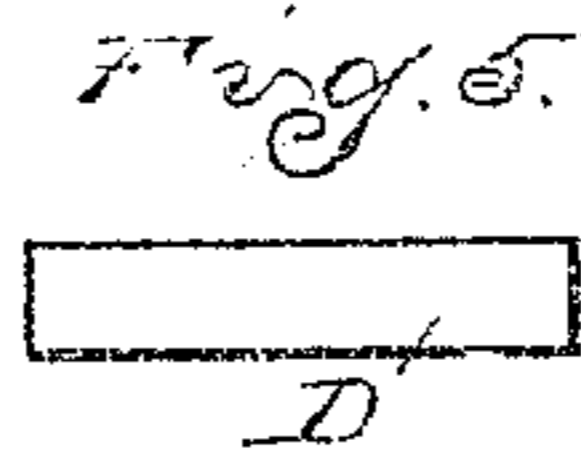
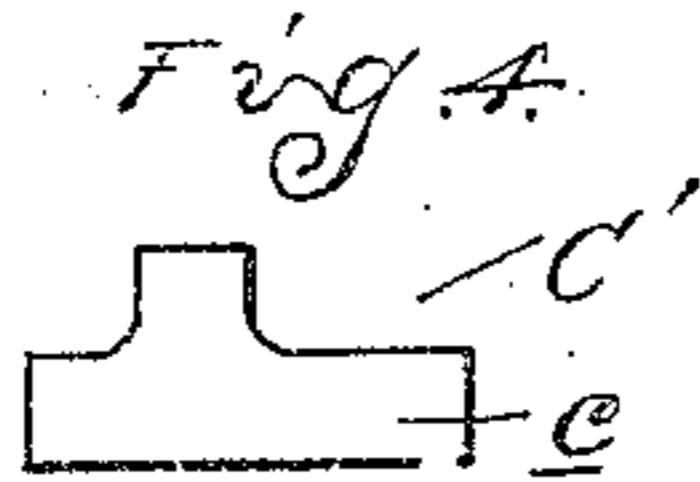
PATENTED MAY

C. A. CHAMBERLIN.

BUILDING WALL.

APPLICATION FILED APR. 10, 1905.

2 SHEETS—SHEET 2



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UNITED STATES PATENT OFFICE.

CLINTON A. CHAMBERLIN, OF DETROIT, MICHIGAN.

BUILDING-WALL.

No. 819,979.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed April 10, 1905. Serial No. 254,880.

To all whom it may concern:

Be it known that I, CLINTON A. CHAMBERLIN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Building-Walls, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention relates to building-walls of that type commonly known as "two-piece" construction and in which a hollow wall is produced by two series of blocks forming, respectively, the inner and outer faces and having projections bridging across the hollow space between.

15 The present construction is one which may be built from a comparatively few simple forms of blocks, so as to meet all the requirements of ordinary building construction.

20 The invention therefore consists in the peculiar construction and combination of blocks to form a building-wall, as hereinafter set forth.

25 In the drawings, Figure 1 is a plan illustrating a portion of a building-wall of my improved construction. Fig. 2 is a similar view of the alternate course of blocks, illustrating, in connection with Fig. 1, how the wall is bonded. Fig. 3 illustrates a chimney construction built in the wall. Figs. 4, 5, 6, 7, 8, 9, 10, 11, and 12 illustrate the construction of blocks employed in building the wall and as variously modified.

35 In the present state of the art artificial building-blocks are formed from a plastic material, such as a mixture of sand and cement, and are generally manufactured by hand-operated molding-machines located at the point where the building is to be erected. To facilitate the work of molding the blocks, it is desirable to limit the blocks to as few distinct forms and sizes as possible, and it is also advantageous to have forms which may be molded without coring. In the present construction only four types of blocks are used, and these for walls of different thickness are only altered in one dimension. Moreover, all four types of block may be easily molded on a single machine and by simple adjustments.

45 The form of block which is used in the construction of a simple straight wall, such as that designated by A and as illustrated in Fig. 6, is L-shaped, comprising a long side a and a shorter side b . The long side a is usu-

ally the standard length of full block; but where required this may be shortened to three-fourths, one-half, one-fourth, or any other division required. The short arm b 60 may be varied in length according to the width of the wall desired, and the change in the length of this arm does not require any corresponding change in the length of the long arm, as will be explained hereinafter. A 65 straight wall formed with these L-shaped blocks is shown in the upper portion of Fig. 1, and the blocks are assembled with those forming, respectively, the outer and inner faces of the wall oppositely arranged—i. e., their 70 shorter arms b extend, respectively, inward and outward. This construction of straight wall may be extended to an indefinite length by the use of this one form of block A; but when it is necessary to turn a corner other 75 forms are required in addition. Thus on the left-hand upper side of Fig. 1 the corner is formed by an L-shaped block B, in which the short arm is one-half the length of the long arm and turns the corner on the outer face of 80 the wall. The inner face of the wall is completed at the corner by the insertion of a T-shaped block C, which, as shown in Fig. 1, is arranged with the head of the T parallel to the long side of the wall and the stem of the 85 T parallel to the turned corner. A straight block D is also employed in connection with the T-shaped block on the inner face of the turned portion of the wall, after which the wall may be extended by the use of L-shaped 90 blocks alone.

For turning the opposite corner—that is, on the right-hand side of Fig. 1—another form of block E is employed in connection with those already described and which is of 95 U shape, having two short arms b' b'' at its opposite ends. This U-shaped block may be arranged at any point desired in the straight portion of the wall intermediate the corners thereof, and its function is to change the 100 directions of the L's. Thus when the corner is reached the L-shaped block forming the outer face of the wall is properly arranged to turn the corner, as illustrated at F on the right-hand side of Fig. 1. The inner face of 105 the wall is completed at the corner by a T-shaped block C', similar to the block C, but having one arm c extended in length, as illustrated in Fig. 4.

By using the system above described the 110 wall may be built with any number of rectangular turns therein and without the neces-

sity of employing blocks of any other form than those described. Where, however, it is desired to form chimneys or pilasters or where the wall turns at any angle other than a rectangle, blocks of slightly-modified form are necessary. Thus on the left-hand side of Fig. 1 a single-flue chimney is formed by a block G, which is of the U form, similar to the block E, but having its short arms b^3 extended, so that when arranged to abut against the blocks forming one face of the wall a projection is formed beyond the opposite face of the wall.

In Fig. 3 a modification is illustrated in which a two-flue chimney is produced by the combination of a U-shaped block H, having extended short arms and a U-shaped block I, one of the short arms of which is correspondingly extended, while the other is the normal length. These as arranged will produce an inwardly-projecting chimney having two flues supported by the arms b^4 of the block I.

An angle in the wall suitable for the formation of a bay-window may be produced by substituting for the L-shaped blocks angling blocks and bonding these U's and L's at opposite ends.

As thus far described a single course only of the wall has been referred to. In laying the alternate course it is desirable to bond every joint of this first course, which may be done by placing the L and U shaped blocks in the straight wall to overlap the blocks of the lower course by one-half their length. The bonding at the corners is produced by reversing the L's, so that the short arm in the superposed course is arranged over the long arm of the lower course. The inner corners are bonded by changing the position of the T-shaped blocks C so that the stem of the superposed block will overlap the head of the lower block, this arrangement being illustrated in Fig. 2.

It has been stated that a straight wall formed of the L-shaped blocks may be extended with the L's oppositely arranged by the employment of intermediate U's. In order that this may be done, I preferably arrange the blocks respectively forming the inner and outer faces of the wall so as to overlap in the manner illustrated—that is, instead of being arranged so that the joint between blocks in one face is at the center of the blocks in the opposite face the joint is removed from said center by the thickness of the block. Stated in other words, the inner face of the short arm of the L forming one face of the wall A is arranged at the center of the L forming the opposite face of the wall. Thus the thickness of the short arm is always arranged upon one side of the center of the opposite block, and this holds true when U-shaped blocks are substituted for L's, the

only difference being that this shifts the arm to the opposite side of the center.

It will be understood that all of the forms of blocks which have been referred to may be manufactured on a single molding-machine by very simple adjustments, and where the wall is constructed in the manner described every joint in one course will be bonded by the blocks in the superposed course.

What I claim as my invention is—

1. A hollow building-wall comprising L-shaped blocks arranged with their long arms to form respectively the inner and outer faces of the wall and their short arms forming bonds between said faces, the L's in different longitudinal portions of said wall being oppositely arranged and U-shaped blocks uniting said portions of the wall formed by the oppositely-arranged L's.

2. A hollow building-wall comprising L-shaped blocks arranged to form with their long arms respectively the outer and inner faces of the wall and their short arms bonds between said faces, the opposite corners of said wall being formed by oppositely-arranged L's, and U-shaped blocks arranged intermediate the L-shaped blocks extending from said opposite corners.

3. A hollow building-wall comprising L-shaped blocks arranged to form with their long arms respectively the outer and inner faces of the wall, and with their short arms bonds between said faces, the outer corner of said wall being formed by one of said L's and a T-shaped block for forming the inner corner.

4. A hollow building-wall comprising L-shaped blocks arranged to form with their long arms respectively the outer and inner faces of the wall and with their short arms bonds between said faces, an L-shaped block having the short arm thereof one-half the length of the long arm forming the outer corner of the wall and a T-shaped block forming the inner corner.

5. A hollow building-wall comprising L-shaped blocks arranged to form with their long arms respectively the inner and outer faces of the wall and their short arms bonds between said faces, an L-shaped block forming the outer corner of said wall, and an inner corner formed by a block having integral bonds extending to the outer face in line respectively with the adjoining inner faces.

6. In a hollow building-wall having its outer and inner faces formed by separate blocks connected by bonds extending across the intermediate space, a corner formed by an outer L-shaped block and an inner block having integral bonds extending to the outer face in line respectively with the adjoining inner faces of the wall.

7. In a hollow building-wall, a corner having its outer face formed by L-shaped blocks

provided with long and short arms reversed in alternate courses, and T-shaped blocks forming the inner corner with bonds in line with the adjoining inner faces, said blocks being arranged in alternate courses with their heads and stems reversed.

8. In a hollow building-wall having its inner and outer faces formed by separate blocks, a corner formed by an outer L-shaped block and an inner block having integral bonds extending to the outer face in line respectively with the adjoining inner faces of the wall, said inner blocks being arranged in alternate courses to maintain said integral bonds and to alternately bond with said adjoining inner faces.

9. In a hollow building-wall having its outer and inner faces formed by separate blocks, a chimney or pilaster formed by a U-shaped block having the end of its parallel arms adjacent to the blocks of the opposite face.

10. In a hollow building-wall having its outer and inner faces formed by separate blocks, a chimney or pilaster formed by a U-

shaped block, with the ends of its parallel sides adjacent to one face of said wall, and its third side projecting beyond the plane of the opposite face of the wall.

11. In a hollow building-wall having its outer and inner faces formed by separate blocks, a two-flue chimney or pilaster formed by U-shaped blocks arranged in the opposite faces of said wall, one of said blocks being flush with the face in which it is arranged, and the opposite block forming an offset in the opposite face of the wall.

12. In a hollow building-wall having its outer and inner faces formed of separate blocks, the straight portions of said wall being formed by the combination of L and U shaped blocks, and the corners being formed by a combination of L-shaped and T-shaped blocks.

In testimony whereof I affix my signature in presence of two witnesses.

CLINTON A. CHAMBERLIN.

Witnesses:

EDWARD D. AULT,
P. M. HULBERT.