

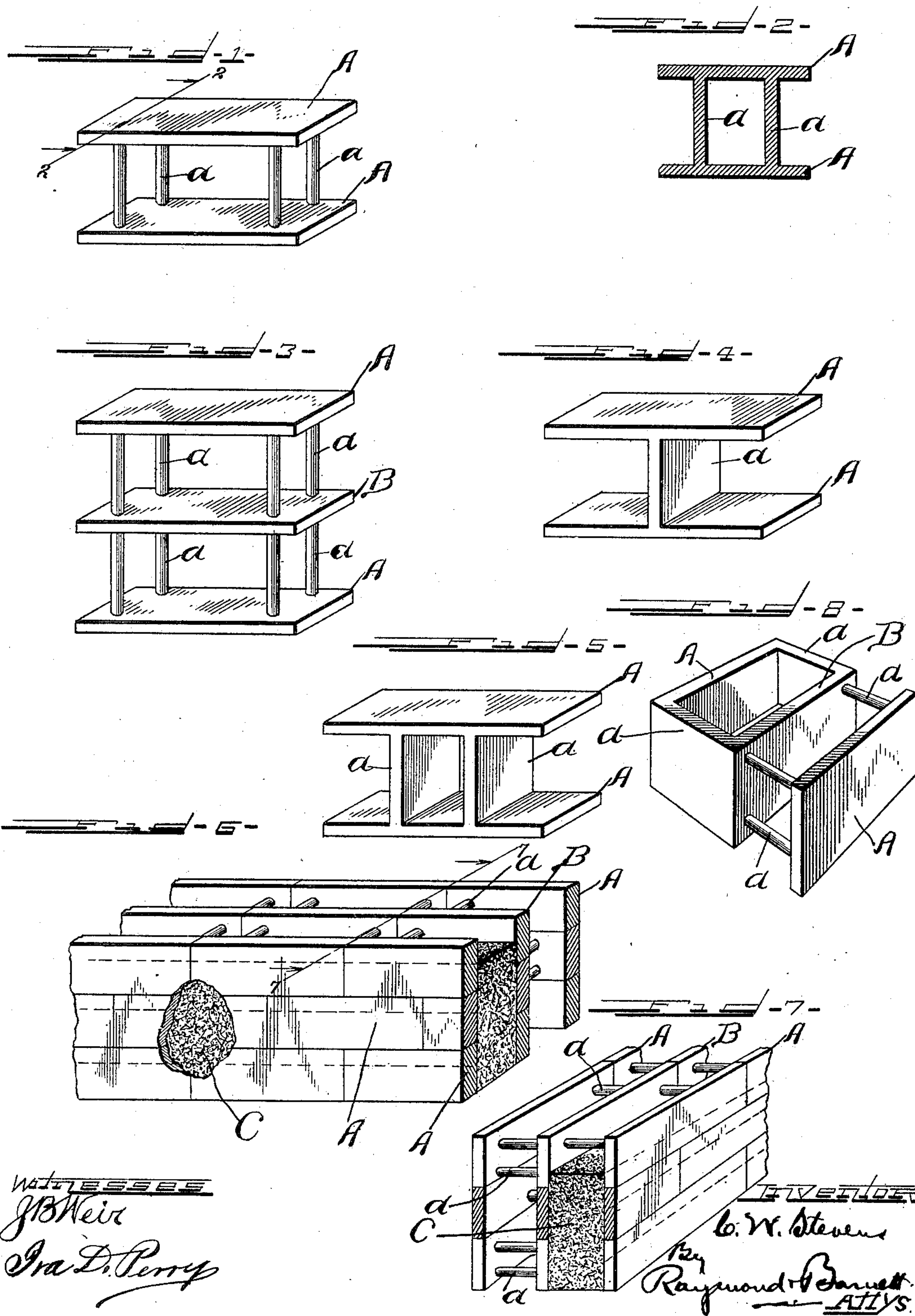
No. 699,587.

Patented May 6, 1902.

C. W. STEVENS.
ARTIFICIAL BUILDING STONE.

(Application filed Jan. 7, 1901.)

(No Model.)



UNITED STATES PATENT OFFICE.

CHARLES W. STEVENS, OF NORTH HARVEY, ILLINOIS.

ARTIFICIAL BUILDING-STONE.

SPECIFICATION forming part of Letters Patent No. 699,587, dated May 6, 1902.

Application filed January 7, 1901. Serial No. 42,429. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. STEVENS, a citizen of the United States, residing at North Harvey, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Artificial Building-Stones, of which the following is a specification.

My invention relates to improvements in artificial building-stones made from cement or like material and especially adapted for use in the construction of outer walls of buildings.

The object of my invention is to furnish such artificial building-stones which can be cheaply, simply, and quickly made, by the use of which walls may be built rapidly and without the use of mortar or skilled labor and which will provide means for constructing such walls which shall be practically frost-proof, wind-proof, and damp-proof, which shall contain no joints passing through the walls, which shall furnish ready means for constructing such walls with a continuous dead-air space, which space may also be used to contain gas-pipes, water-pipes, electric wires, &c., and which shall permit of the construction with one set of materials and at one operation of a wall fully finished on both sides without subsequent plastering, painting, or other finishing or decoration. These and such other objects as may hereinafter appear are attained by the devices illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the simplest form of my improved building-stone. Fig. 2 is a cross-section on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the preferred form of my building-stone. Figs. 4 and 5 show modifications of my invention. Fig. 6 is a perspective view of a wall laid with my improved stones, showing parts of the wall broken away to disclose the concrete filling. Fig. 7 is another perspective view of the same wall, and Fig. 8 is a perspective view of another modification.

These stones are most readily made by the process described and claimed in United States Letters Patent No. 624,563, granted to me May 11, 1899, and consist, essentially, in the parallel walls A, suitably connected, as by the posts *a*, formed integrally therewith, and a distinctive feature of my invention is

that the space between the walls A is left open on the four sides not inclosed by the walls A.

In Figs. 1, 2, and 3 I have shown the walls A connected by integral cement posts located adjacent to each of the four corners of the side walls. Obviously wooden, metal, or other posts might be inserted in the molds in the process of making the stones, so as to become embedded in the walls A and serve in lieu of the integral cement posts *a*.

In Fig. 4 I have shown the side walls A connected by a partition *a*, while in Fig. 5 I have shown two such connecting-partitions.

While it is practical to use the construction shown in Fig. 5, I consider it less desirable, for reasons which will hereinafter appear.

In Fig. 3 I have shown what I consider by far the best embodiment of my invention. The stone, as shown in Fig. 3, consists of two outer walls A and an intermediate wall B, said walls being arranged parallel with each other and spaced apart and connected by integral posts *a* adjacent to each of the four corners of the walls A and B. This construction, in my judgment, furnishes the strongest stone, enables the construction of a wall of ample thickness which shall be at the same time frost-proof, damp-proof, and wind-proof, shall be without joints of any kind passing therethrough, and yet shall be a hollow wall for containing dead-air space and for the reception of gas and water pipes, electric wires, &c.

Figs. 6 and 7 show sections of a wall constructed with this stone. Such a wall can be rapidly and substantially built by unskilled labor and without mortar in the following manner: A course 1 of my improved building-stones, made as shown in Fig. 3, is laid around the building end to end and upon any suitable foundation, or, indeed, without a foundation. As these artificial stones are made in molds and of exact sizes, the stones will fit end to end very accurately. Thereupon a course of concrete is filled into the space between the outer wall A and the intermediate wall B all the way around this entire course. It will be seen that when this concrete shall have set it forms one continuous mass of concrete or stone around the entire first course of the building so laid, securely uniting the stones end to end without mor-

tar and leaving no joint or crevice through the wall at any point through which frost, damp, or wind can penetrate. The operator next lays a second course of the stone upon the first course, their upper and lower edges being true and matching accurately without the use of mortar, and concrete is then poured into this second course of stone between the outer wall A and the intermediate wall B sufficiently to completely fill the remaining portion of said space in the first course and to partially fill said second course. It will be evident that the concrete now not only forms a continuous mass around the building, uniting the stones to each course end to end without mortar, but it forms a solid wall of material between the outer wall A and the intermediate wall B of the stones of each course, unites each course firmly to the course next above or below it, and leaves no joint, crack, or crevice between the various courses. This homogeneous concrete wall between the walls A and B of my improved stone is shown at C in Figs. 6 and 7. In these figures the dotted lines indicate the successive layers of concrete.

Obviously instead of building the wall in the manner described several courses of stone may be put in place, at the convenience of the builder, and sufficient concrete then filled in to unite such several courses at one time instead of uniting them course by course.

It is also evident that where it is desired to especially strengthen the building as against wind-storms, earthquakes, and the like metal rods, cables, or other suitable material may be laid within the space between the outer wall A and the intermediate wall B before filling in the concrete. When the concrete is then filled in, such rods, cables, and the like become an integral part of the wall, thus producing a wall of very great strength to resist strains of all kinds.

Various modifications may be made in these stones without departing from the spirit of my invention, and while I consider that my invention may be utilized to the best advantage in stones constructed as shown in Figs. 1, 2, 3, and 4 of the drawings, yet various changes therein may be made—such, for instance, as shown in Fig. 8, in which the wall B and the inner wall A are united by a web or partition at each end of the stones. While it may be convenient to have a continuous opening around a building between the inner wall A and the wall B, this obviously is not necessary, as the stones are securely joined

together by the continuous mass of mortar, concrete, or artificial stone which is filled in between the wall B and the outer wall A. Other like modifications will readily suggest themselves to those skilled in the art. The only essential feature of my invention is that the stone shall be constructed so as to permit of the union of the various stones end for end and of the various courses to each other by a body of concrete or like material, which may be filled in after each course of stone is laid, so as to overlap the joints between the stones and between the courses, so that there shall be no joint or crevice through the wall.

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

1. An artificial building-stone comprising two outer walls spaced apart and connected together by posts formed integrally therewith, substantially as described.

2. An artificial building-stone comprising two oppositely-disposed walls spaced apart and connected together, the space between said walls being uninclosed on four sides, substantially as described.

3. An artificial building-stone comprising outer parallel walls spaced apart and connected together, the space therebetween being open on all sides not inclosed by said outer walls, substantially as described.

4. An artificial building-stone comprising two outer walls and an intermediate wall, said walls being spaced apart and connected together by posts formed integrally therewith, substantially as described.

5. An artificial building-stone comprising three walls, spaced apart and connected together, the space between two of said walls being open on three sides, substantially as described.

6. An artificial building-stone comprising three walls spaced apart and connected together, the space between two of said walls being open on four sides, substantially as described.

7. An artificial building-stone comprising two walls spaced apart and connected together by posts, substantially as described.

8. An artificial building-stone comprising three walls spaced apart and connected together by posts, substantially as described.

CHARLES W. STEVENS.

Witnesses:

O. R. BARNETT,
M. E. SHIELDS.