JAMES J. JOHNSTON.

Improvement in Artificial Stone for Buildings.

No. 114,946. Patented May 16, 1871.

Fig. 1.

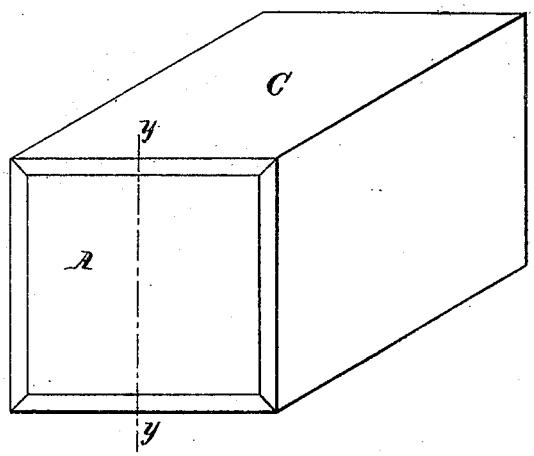


Fig. 3.

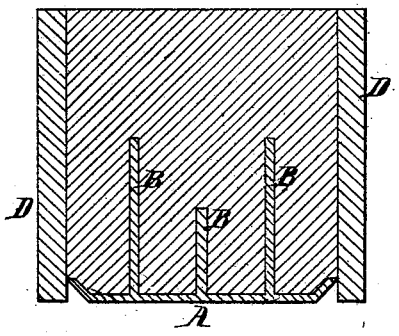


Fig. 2.

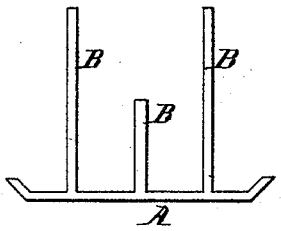
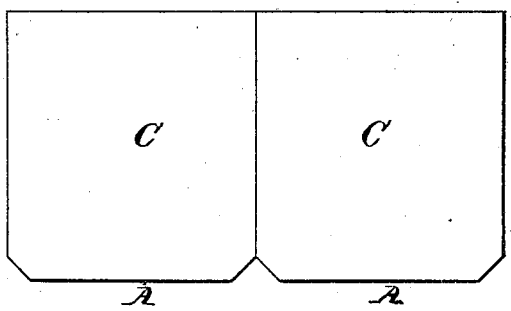


Fig. 4.



Witnesses.

Jas. D. Patten

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UNITED STATES PATENT OFFICE.

JAMES J. JOHNSTON, OF COLUMBIANA, OHIO.

IMPROVEMENT IN ARTIFICIAL STONES FOR BUILDINGS.

Specification forming part of Letters Patent No. **114,946**, dated May 16, 1871.

To all whom it may concern:

Be it known that I, JAMES J. JOHNSTON, of Columbiana, in the county of Columbiana and State of Ohio, have invented a new and useful Improvement in Artificial Stone for Buildings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in constructing artificial stone with its front end or face provided with a metallic surface, said surface being placed on the stone in its construction, and so arranged, with relation to the sides or surfaces which form the joints between the stones in building, that no portion of the metallic surface of the stone shall project inward on the surfaces which form the joints.

To enable others skilled in the art to make and use my invention, I will proceed to describe more fully its construction.

In the accompanying drawing, which forms part of my specification, Figure 1 is a perspective view of my improvement in artificial stone. Fig. 2 is a transverse section of the metallic surface. Fig. 3 is a vertical section of the mold, at line *y* of Fig. 1, for forming the blocks of stone, and also represents a transverse section of the metallic surface arranged in the mold prior to forming or molding the block of stone. Fig. 4 represents a top view or plan of two blocks of the stone when placed together in proper position with relation to each other.

In the accompanying drawing, A represents the metallic face for the block of stone. On the inner surface of this face-piece is a number of projections, B, which are used for the purpose of anchoring or securing the face-piece A to the block C.

The form of the outer edges of the face-piece A is such that a rabbet is formed around the front joints of the block C, as indicated in Fig. 4.

The outer surface of the face-piece A may be made ornamental, which ornamentation may consist of any desired design.

The face-piece A may be adapted to blocks of artificial stone for projections around the doors, windows, and cornice of the buildings.

C represents the block of artificial stone, which may be constructed of cement, sand, gravel, and lime, mixed thoroughly together, and moistened with water.

A very good conglomerate for the purpose of forming the blocks of artificial stone may be made by taking "hydraulic cement" or "Rosendale cement," thirty parts; clean "sharp sand," forty-five parts; clean gravel that will pass through a No. 1 sieve, forty-five parts; quicklime, two parts. Mix the whole well together, and moisten the mixed mass with water sufficient to make it adhesive under pressure.

Another very excellent compound for forming the blocks of artificial stone may be made by taking clean sand, forty parts; finely-powdered iron ore or iron, forty-parts; pulverized sulphur, twenty parts; the whole mixed thoroughly together, and made into an adhesive mass by the application of heat, and, while warm, formed in a mold into the desired form of blocks. This latter compound will be costly, but will form a very strong and durable stone.

The artificial stone is constructed with a metallic outer surface, as hereinbefore described, by placing the face C in the mold D, as indicated in the accompanying drawing, then ramming or pressing the material for the stone into the mold until it is full. The surplus material is then "struck off," and mold D removed from around the formed mass, which is then removed to a suitable place or dry-house and dried.

The metallic surface A will be of very great advantage in manipulating the blocks of artificial stone while they are in a green or undried state, and of very great advantage in their transportation from the place of manufacture to the place of building.

By constructing artificial stone with a metallic front surface, as hereinbefore described, the front surface, or the entire outer surface, of the building may be of iron, and such buildings may be of the highest order of architecture, and constructed at comparatively a low rate of cost.

I wish it clearly understood that I do not claim, broadly, lining stone or the outer surface of walls of buildings with iron.

What I claim as of my invention is—

1. An artificial stone, the outer end or side of which is provided, during its construction, with a metallic surface, substantially as herein described, and for the purpose set forth.

2. A new article of manufacture, viz., an artificial stone constructed as hereinbefore described.

JAMES J. JOHNSTON.

Witnesses:
L. C. THOMAS,
GEO. H. THOMAS.