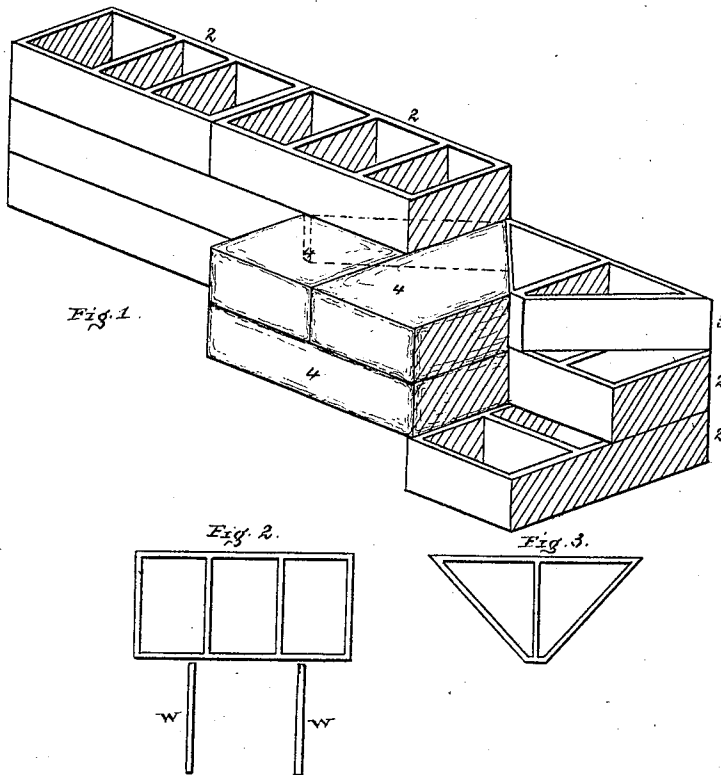


S. M. GROFF.

Improvement in Fire-Proof Walls for Buildings.

No. 129,659.

Patented July 23, 1872.



Witnesses.

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# UNITED STATES PATENT OFFICE.

SAMUEL M. GROFF, OF ELIZABETHTOWN, PENNSYLVANIA.

## IMPROVEMENT IN FIRE-PROOF WALLS FOR BUILDINGS.

Specification forming part of Letters Patent No. 129,659, dated July 23, 1872.

Specification describing certain Improvements in Cast-Iron Cells in the Construction of Fire-Proof Buildings, invented by SAMUEL M. GROFF, of Elizabethtown, in the county of Lancaster and State of Pennsylvania.

This invention relates to an improved mode for constructing fire-proof walls for buildings by means of open cells or castings of a single piece, adapted to bind in with ordinary brick to thicken the wall, and so as to form a firm connection with the concrete and produce a neat metallic front at a cost not much more than ordinary pressed brick.

The accompanying drawing illustrates the nature of my invention.

Figure 1 shows a portion of a wall with the cast-iron cells 2 3 in place in combination with common brick, 4. Fig. 2 shows the top or three-celled square box, open at both top and bottom. Fig. 3 shows a triangular box-front, full length of Fig. 2, having a central partition, and used to allow space for the binding at regular intervals with the bricks employed.

These open cells, Fig. 2, may be of the shape and size of the brick used, or double; the size is not material, provided they are proportioned to work even with the brick used.

In Fig. 2 I show three cells. The detached wings W shown may, in the molding, be inserted so as to be attached in the cast for binders, for the purpose of inserting a brick end-wise at certain points, and crossing in the next tier, and thereby secure a firm connection of

the wall; or I employ instead, for that purpose, the two-celled triangular box, Fig. 3. This admits of various applications for binding the cast material with the brick and to leave a uniform compact metallic front, bound by the filling in of the interchangeable cells with concrete, forming a union between the several tiers of an indestructible material, more enduring than ordinary brick, and altogether calculated to make a neat and moderately-cheap fire-proof wall.

It is believed that such a wall would have availed in the fiery ordeal of Chicago.

I am aware of the previous use of plates with rabbets and tongues to form hollow walls or cast-iron buildings, as well as otherwise-formed cast-iron building-pieces, and such as cast-iron shells having projections and holes in them; but I am not aware of any such cast pieces of two or three cells of a single piece, made in the manner and for the purpose shown and described.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of cast pieces 2 and 3 with their respective cells, cast in a single piece, either as an oblong square or triangle, as shown, used jointly or separately with ordinary brick, for the purpose specified.

SAMUEL M. GROFF.

Witnesses:

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