J. SIDEBOTHAM.

CONCRETE-BUILDINGS.

No. 194,734. Patented Aug. 28, 1877.

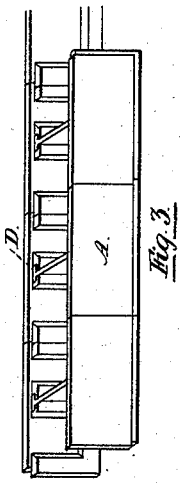

Fig. 3.

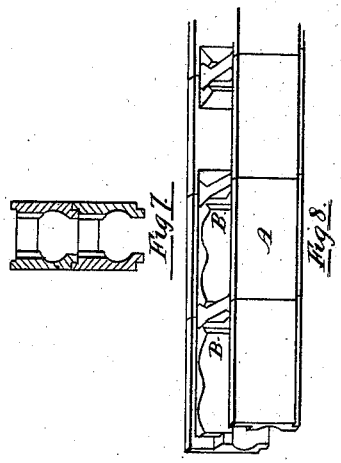

Fig. 8.

Fig. 7.

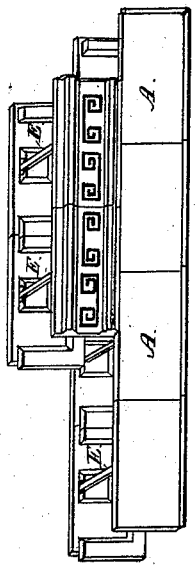

Fig. 4.

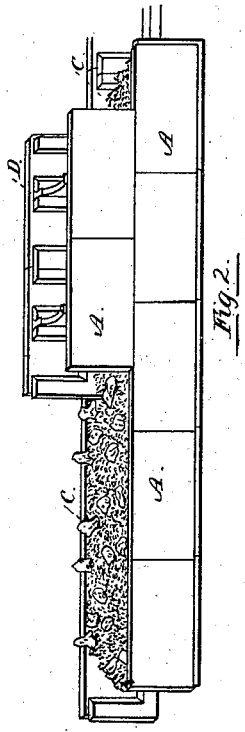

Fig. 2.

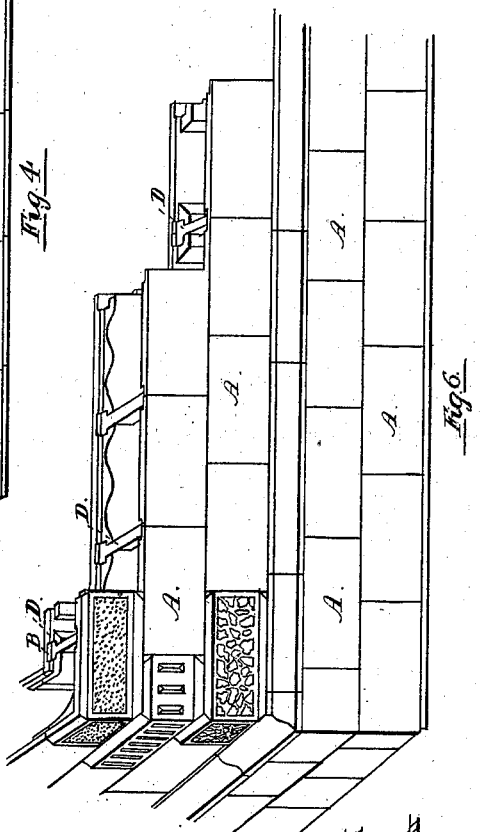

Fig. 6.

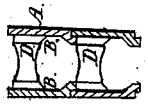

Fig. 1.

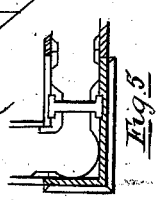

Fig. 5.

Witnesses:
Donn B. Tuttchell
Will M. Dodge.

Inventor:
J. Sidebotham
by Dodge & Son
Attys.

UNITED STATES PATENT OFFICE.

JOHN SIDEBOTHAM, OF BLACKPOOL, ENGLAND.

IMPROVEMENT IN CONCRETE BUILDINGS.

Specification forming part of Letters Patent No. **194,734**, dated August 28, 1877; application filed July 3, 1877.

To all whom it may concern:

Be it known that I, JOHN SIDEBOTHAM, of Blackpool, in the county of Lancaster, England, architect, have invented new and useful Improvements in Concrete Buildings, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

In some parts of the country there is an abundance of good rubble-stone, but none that will form good bedding material. At these points brick-clay is usually scarce, but, if plentiful, can be burnt, and when in the form of nodules, technically known as "burnt ballast," it is well adapted for the purposes of my invention, as hereinafter described.

My invention is designed to combine the use of this rubble or burnt ballast with increased speed, cheapness, strength, and durability of erection, at the same time producing buildings decidedly superior in appearance than can be otherwise produced at the same price.

My invention consists in constructing a wall of two upright series of plates, arranged at a suitable distance apart and tied together by transverse tiles or ties, with or without an internal filling of concrete, cement, or similar material.

I am aware that walls have been constructed of hollow blocks, open at the top and bottom, filled with concrete, and connected at their ends by keys, &c.; also, that a wall of brick or masonry has been faced with tiles; and also that a wooden frame has been faced with tiles secured thereto by cement; and such constructions I do not claim, my wall being readily distinguishable in having the two parallel series of plates or slabs, and the connections between them.

The advantages of building the walls of my slabs, rather than hollow or solid blocks, are that the slabs can be transported in a much smaller bulk, are cheaper of construction, and less damageable in transit.

I construct the slabs in such manner that they shall, when in position, present a uniform surface on each exterior of the wall, at the same time interlocking with each other in the most complete manner. One plan of doing this is shown, with slight variation, in Figs. 1 to 3. On the bottom and one end of each main slab I place a flange, extending outward parallel with the main surface of the slab, but recessed back the thickness of the slab, so as to form a rabbet overlapping on the inner side of the next slab below it and on one side of it. Also, on the back of each slab I mold two projecting ridges parallel to each other, usually in a vertical, but for special purposes, sometimes in an oblique, direction. Between these is a dovetail groove. Both sides of the wall are alike in this respect, care being taken that the two dovetail grooves are exactly opposite each other. All the slabs in these respects are molded alike. Into these dovetail grooves I slide a transverse slab or tile, with dovetail ends nicely fitting the dovetail grooves, and in permanent erections I first plaster or cement the groove, or thin cement can be run into these dovetail ties, binding all tight together. The various courses are always made, when practicable, to break joint with each other. The hollow space left between the two sides of the wall can now be filled in with concrete or other materials, as before specified.

Special tiles, slabs, or blocks are formed for the sills of windows and doors, and ornamental designs can, if desirable, be molded on them.

Sometimes, as in Fig. 4, instead of transverse slabs, I use iron dowels or clamps fitting with dovetails into the grooves, or in place of grooves I mold stout eyes on the backs of the slabs, and connect them with iron bars bent at the end, the said bent ends being inserted into the said eyes.

Figs. 1, 2, and 3 show an ordinary wall wholly of slabs and concrete filling. A A are the main slabs, with overlapping flanges on the bottom and one end; B, grooves, molded on their insides to carry transverse slabs D. C is the filling of concrete.

In Fig. 4, E is a metal clamp, instead of slab D of Figs. 1, 2, and 3. The fronts of the slabs are shown ornamentally molded. This is done by cutting the pattern on the board forming the mold.

In Fig. 8, instead of the dovetail grooves being on the center of each slab, they are shown on the ends of the slabs, the result being precisely the same when finished. This

method saves the use of a core in molding. In Fig. 6 the same arrangement is shown, but with simple T-grooves instead of dovetails.

Fig. 5 represents a view of a corner of a building.

I claim—

1. A wall composed of two parallel series of slabs or plates, one on the outside and the other on the inside, connected by the transverse ties, with or without the filling of concrete or cement.

2. The wall, composed of two upright parallel series of plates, the cross-ties connecting them, and the filling of concrete or equivalent material.

3. In building constructions, the combination of the slabs A, the T-grooves and T-ended tie-slabs, substantially as shown in Fig. 6.

JOHN SIDEBOTHAM.

Witnesses:
EDW. G. COLTON,
ROBERT WILLIAMS.