

Z. STREET.
CEMENT AND TILE ROOFING.

No. 34,653.

Patented Mar. 11, 1862.

Fig. 1



Fig. 2.

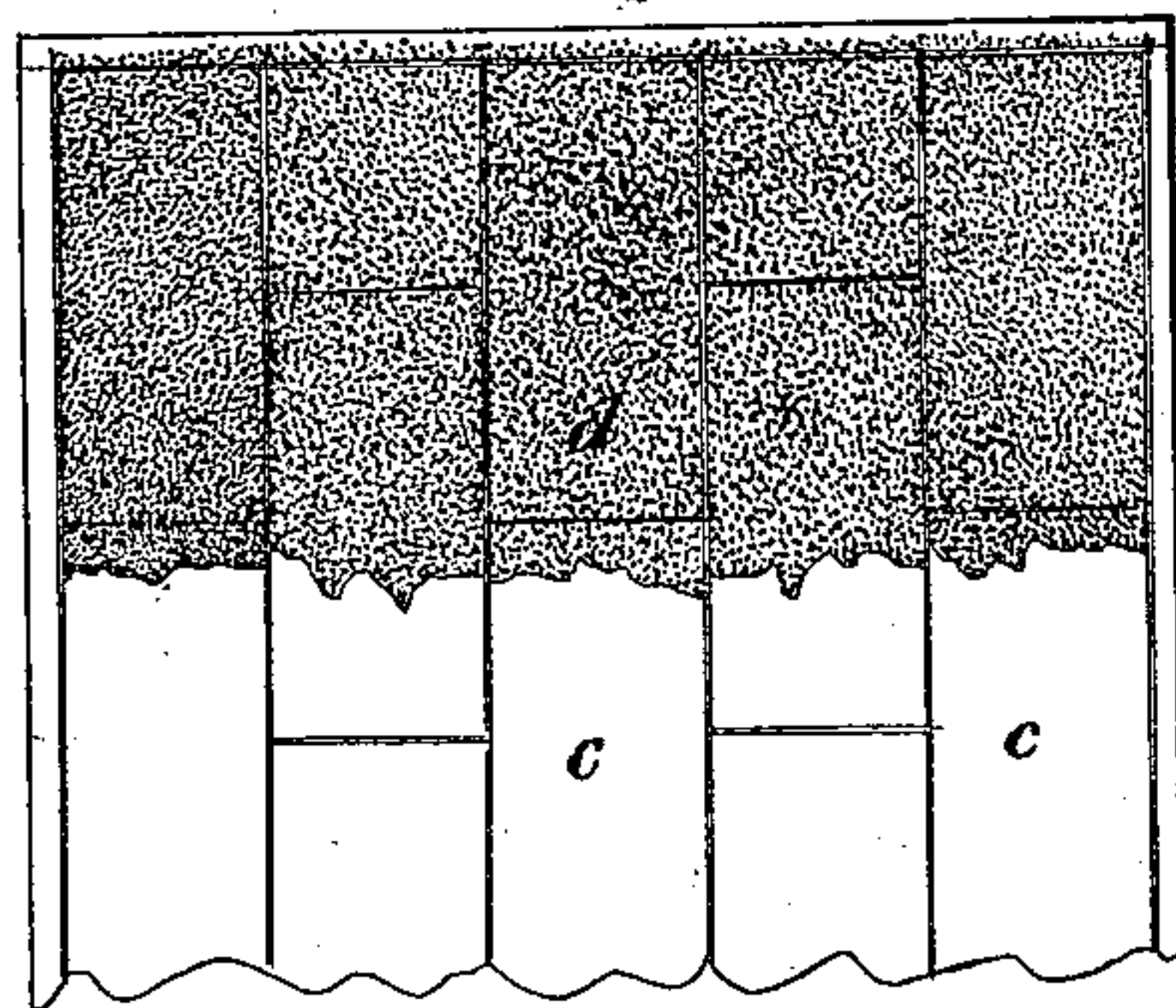
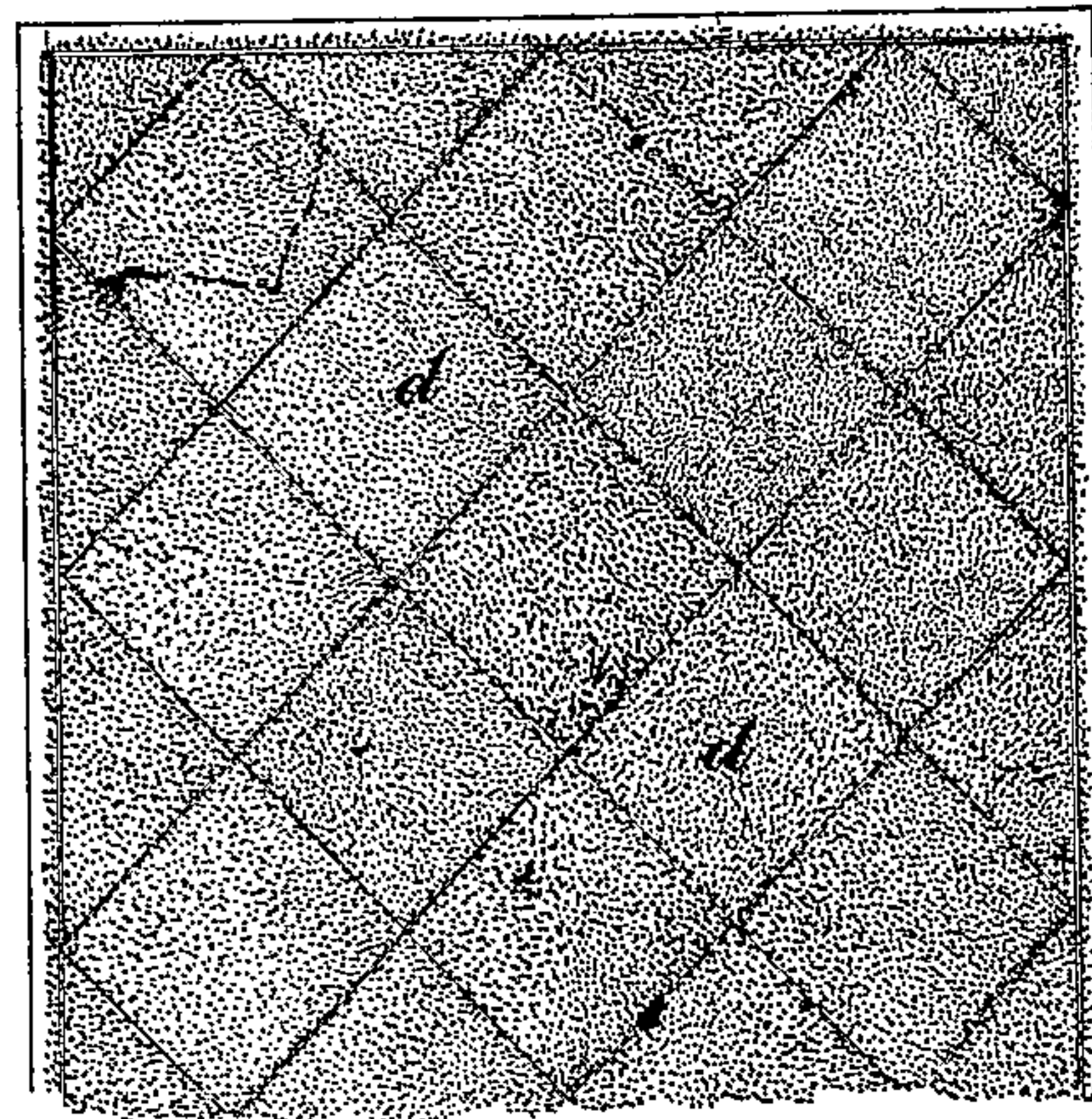


Fig. 3



Witnesses:

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ZADOK STREET, OF SALEM, OHIO.

IMPROVED CEMENT AND TILE ROOFING.

Specification forming part of Letters Patent No. 34,653, dated March 11, 1862.

To all whom it may concern:

Be it known that I, ZADOK STREET, of Salem, in the county of Columbiana and State of Ohio, have invented a new and useful Improvement in Roofing; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a section of my improved roof. Fig. 2 is a plan of the same partly completed. Fig. 3 is a plan illustrating a different form and arrangement of the tiles.

Similar letters of reference indicate corresponding parts in the several figures.

The subject of my invention is a roofing consisting of a body of burnt clay or other material laid in and covered by cements of peculiar composition, as hereinafter explained.

To enable others skilled in the art to which my invention pertains to make and use it, I will proceed to describe the manner in which it is constructed and applied.

I first take coal or pine tar or pitch and after thoroughly expelling the water therefrom by boiling add common salt in the proportion of about one to thirty. Pulverized coke or cinders are then added in sufficient quantity to give the compound the consistency of thick mush. The salt operates as a flux, causing the tar to boil up freely and mingle intimately with the pulverized coke. Alum may be used instead of salt with like effect.

The above compound being spread over the sheathing of the roof in a heated state and in sufficient thickness, flat tiles of burnt clay are laid over the whole surface and pressed into the cement, so as to cause it to fill the joints. The whole is then covered with the same compound, with the addition of, say, one-thirtieth of its bulk of lime, to form a hard and solid body when cold and dry. Immediately upon the application of the upper coating of cement, and while yet hot, a coating of sand is applied to give additional solidity and durability. In very cold weather it is preferable to heat the sand before ap-

plying, it in order to insure its more thorough attachment to the cement.

In the drawings, *a* represents the sheathing laid upon rafters or in any suitable manner.

b is the first coating or bed of cement; *c*, the rigid body laid therein, and *d* the outer coating.

The tiles may be of any preferred form, and may be arranged upon the roof in any manner desired. They should, however, be so disposed as to break the joints in order to avoid more effectually all danger of displacement and leakage. It is believed that on the whole square tiles arranged diagonally on the roof, as represented in Fig. 3, will be found preferable, both as presenting a more symmetrical and uniform surface and lessening the danger of the penetration of water through imperfect joints.

I do not restrict myself to any specific material for the rigid body of the roof. Metal, slate, stone, or wood may, if preferred, be substituted for the clay; but the latter is believed to be preferable, owing to its moderate cost and comparative exemption from the expanding and contracting effects of changes of temperature. Neither do I restrict myself to any specific material for the outer covering of the roof. In very warm climates and on buildings where the roof will be subjected to much wear or violence, or will be constantly walked upon, a compound of tar, caustic soda, clay, and sand will be found preferable as an outer coating over the tiles. A surface will thus be produced which will be nearly as durable, impervious, and proof against heat as stone itself.

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

A roof composed of a rigid body of any suitable material laid in and covered by cement compounded substantially as herein set forth.

ZADOK STREET.

Witnesses:

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