

# UNITED STATES PATENT OFFICE.

SANFORD E. LORING, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN POROUS PENETRABLE TILES FOR PLASTERING, &c.

Specification forming part of Letters Patent No. **156,361**, dated October 27, 1874; application filed October 9, 1874.

*To all whom it may concern:*

Be it known that I, SANFORD E. LORING, of Chicago, Illinois, have invented a Compound called Spongy or Porous Earthenware, brick, or terra-cotta, or artificial pumice-stone, to be used instead of or in combination with brown mortar or cements as a ground for receiving plaster or other wall-finish, and for covering columns, beams, walls, and floors of wood or iron, or of wood and iron, to protect the same from the action of heat or cold, or, in combination with water-proof cements or paints, from moisture.

The composition is made of clay, as a base, mixed with variable proportions of coke, ashes or pumice, limes, plaster, or cement, coal, wood, charcoal, reeds, straw, or other vegetable and combustible material. The ingredients are pulverized, mixed with water to form a plastic body, then molded into the required form and burned in kilns, like bricks or other earthenwares. In the burning, the combustible matter is wholly or partially destroyed and removed from the body, leaving the incombustible materials in a porous, spongy form, similar to pumice-stone.

The spaces left by materials destroyed in the burning provide places for the particles of earthy matter that in ordinary wares would be filled, and resist the progress of nails, screws, or rivets, but which may be driven into or through this material, for the purpose of securing it to a ground of wood, iron, or other material without readily fracturing this ware.

These spaces, also, greatly increase the suction of the body, and increase its value as a groundwork for receiving cements and mortars, and as a filtering material.

I am aware that coal, sawdust, bitumen, &c., have been combined with clay to assist in burning the ware and increasing the porosity of oven-tiles. To this I make no claim; but I do not know, and do not believe, that combustible and non-combustible materials have before been used to make an earthenware body that could be readily pierced with nails, screws, bolts, rivets, &c., and thus attached to wood, iron, or other frame-work. To secure this result with the least possible weight of material has been my aim, securing at the same time extraordinary porosity, non-conductibility, and, what I think has never before been achieved for bricks or earthenware, penetrability, in the sense that the material may readily be punctured.

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

As a new article of manufacture, porous and penetrable earthenware, brick, tile, or terra-cotta, substantially as and for the purpose described.

SANFORD E. LORING.

Witnesses:

ADOLF HEILE,  
W. T. FURBECK.

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inch 28