

UNITED STATES PATENT OFFICE.

JAMES L. DURROUGH, OF HAMILTON, OHIO.

ART OF BRICK-MANUFACTURE.

SPECIFICATION forming part of Letters Patent No. 303,925, dated August 19, 1884.

Application filed February 21, 1884. (No specimens.)

To all whom it may concern:

Be it known that I, JAMES L. DURROUGH, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in the Art of Brick-Manufacture, of which the following is a specification.

This invention relates to an improved method of treatment for brick after they are molded and before they are subjected to the process of burning in the kiln.

The object of the invention is to more perfectly and rapidly extract from the formed bricks the moisture which was in the clay from which the bricks were formed.

The invention consists in subjecting cold moist brick to the direct action of steam under pressure confined therewith, and subsequently subjecting the brick to the action of dry air, as hereinafter more fully set forth.

In the execution of my improvement, we will assume that we have at hand a strong apartment in which the bricks may be inclosed, the apartment being of sufficient strength to resist an internal pressure, say, of fifty pounds per square inch, and being provided with suitable valves for the admission of steam. The bricks in their moist state are to be placed in this apartment, which may be done by loading the bricks on cars or trucks and running the same into the apartment. The apartment then is to be closed steam-tight and steam admitted under pressure. The result is that the

particles of moisture in the bricks become heated and expanded and fitted for ready evaporation. When the bricks have their contained moisture sufficiently heated, a matter which will be determined by experience, the pressure is relieved in the apartment, which is then opened, after which the bricks are run out of the apartment, and the hot moisture allowed to evaporate by the natural action of the atmosphere, which action may, if desired, be hastened by the use of air-blasts. The effect of this process is to cause a thorough removal of the moisture and an equable shrinkage.

With whatever clays I have applied my improvement to in practice I have been eminently successful, and I contemplate the application of the improvement to clay articles other than bricks.

I claim as my invention—

That improvement in the art of brick-manufacture which consists in subjecting the brick, while cold and moist, to the action of high-pressure steam confined with the brick, and subsequently subjecting the brick to the action of dry air, substantially as and for the purpose specified.

JAMES L. DURROUGH.

Witnesses:

W. A. SEWARD,
ISRAEL WILLIAMS.