UNITED STATES PATENT OFFICE.

JOHN ALLCOCK JONES, OF MIDDLESBOROUGH-ON-TEES, ENGLAND, ASSIGNOR OF ONE-HALF TO THOMAS A. WIGHAM, OF CHICAGO, ILLINOIS.

METHOD OF MAKING PAVING-BLOCKS.

SPECIFICATION forming part of Letters Patent No. 455,213, dated June 30, 1891.

Application filed February 27, 1891. Serial No. 383,115. (No specimens.) Patented in England February 4, 1885, Nos. 7,395 and 7,397.

To all whom it may concern:

Be it known that I, JOHN ALLCOCK JONES, a subject of the Queen of Great Britain and Ireland, residing at Albert Road, Middlesborough-on-Tees, in the county of York, England, have invented certain new and useful Improvements in Methods of Making Paving-Blocks, (for which I obtained Letters Patent of Great Britain on the 5th day of February, 1885, Nos. 7,395 and 7,397;) and I do hereby declare the following to be a full, clear, and exact specification of my said invention.

The object of my invention is to produce economically an artificial stone suitable for paving and the like.

In carrying out my invention I take slag or scoria, which is a refuse from the blast-furnace, and after said slag has been annealed, either by its own initial heat or by extraneous heat, I suffer it to cool and then reduce it to the requisite degree of fineness, and then I mix therewith Portland or other good cement and a sufficient quantity of water to render the mass plastic. This plastic mass is then run or placed in suitable molds, and when sufficiently dry to handle without breaking it is laid the same as flags are laid; or the plastic mass may be run or placed into forms placed on the surface where it is to be laid.

In carrying out my invention I prefer to proceed as follows: I take ordinary blast-furnace slag as it comes from the furnace and run it into blocks of convenient size and place said blocks within an oven or closed chamber. These blocks or pieces of slag cool on their surfaces before being charged into the oven or chamber; but their interiors retain a high degree of heat. In this condition the blocks may be allowed to cool for a period of, say, forty-eight hours or less, during which the slag is annealed, the mass becoming much toughened. Of course extraneous heat may be applied to the oven in order to raise the blocks to a high degree of heat. I then take these blocks of annealed slag and reduce them, the final reduction being effected by the aid of mechanical means, such as a pug-mill or other suitable form of crusher or pulverizer. I mix the comminuted slag with equal parts, by weight, of Portland or other good cement, and when these finely-divided materials are thoroughly mixed I add to the mass the requisite quantity of water to render it plastic. This plastic mass is then placed in molds to form paving-blocks or run into frames to form flags.

I claim—

The method of making paving-blocks, which consists in annealing furnace-slag, then comminuting it, and then mixing it with about an equal portion of cement, rendering the mixture plastic by the addition of water, and finally molding the plastic mass to form, substantially as described.

JOHN ALLCOCK JONES.

Witnesses:

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