UNITED STATES PATENT OFFICE.

GEORGE H. MOORE, OF NORWICH, CONNECTICUT.

IMPROVEMENT IN CONCRETE PAVEMENTS.

Specification forming part of Letters Patent No. 123,280, dated January 30, 1872.

To all whom it may concern:

Be it known that I, GEORGE H. MOORE, of Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Concrete Pavements, of which the following is a specification:

My invention relates to a new and improved mode of laying concrete pavements and sidewalks, whereby the wooden molds or frames now employed in forming blocks in position are dispensed with; and my invention consists essentially in forming in suitable molds, either square, octagonal, circular, semicircular, and other shaped concrete blocks from a compound composed of Portland cement, sand, and gravel, or other such well-known ingredients, which are mixed together in proper proportions, and while in a plastic state are introduced into the molds of the desired forms and there remain until the blocks have "set" or become indurated, so that when removed from the mold they can be transported and handled with safety. The blocks thus formed indurate without the aid of heat, and are formed out of position, which blocks, when placed in position for forming a pavement or sidewalk, will be so arranged in respect to each other as to create a compartment, into which plastic concrete is placed to form another block, the surface of the hard blocks being first sprinkled with powdered steatite, or an equivalent powdered substance, so that the hard block formed out of position or the surrounding block formed in position, either or both, can be detached and removed for the purpose of repair without disturbing the adjoining blocks or sections. The surface where it is designed to lay the pavement or sidewalk is first leveled and properly bedded in any of the well-known methods. Upon this bed is placed a layer of concrete or common cement, wider than the previously-formed or molded block, and upon this plastic layer of concrete the block is placed in its destined position, "setting" it so that the top surface will be level and uniform with the remainder of the pavement when completed. After placing the required number of these hard concrete blocks in position, as above mentioned, the outline of which will be according to the outline, form, or shape of the hard blocks employed, these compartments are then filled with plastic concrete and the same leveled so as to present an uninterrupted smooth top surface. The same is continued until the pavement or sidewalk is completed. Instead of the hard concrete blocks, formed as above described, stone blocks will in some instances be employed and placed in position in a manner similar to the hard concrete blocks, and the compartments created will be filled with plastic concrete. The hard concrete blocks which are formed out of position will in some instances be ornamented on their wearing-surface while in a plastic state in their molds, and when placed in their destined position will have the compartment filled with plastic concrete, as before mentioned. The concrete blocks formed in the molds indurate without the aid of heat, and their component parts are the same as the plastic concrete. The hard blocks being formed in molds under pressure have a smooth surface, are more compact, and hence less liable to fracture or injury when the pavement is first formed. They also perform the important office, as do also the stone blocks, of protecting the plastic blocks formed in position during the process of induration, and also, as is evident, form part of the pavement themselves. The edges or outline of the hard-formed or molded blocks will be sharp and well defined, consequently the corresponding outline of the plastic block formed in position between the hard blocks will be equally sharp and well defined. Various shapes, such as square, octagonal, circular, semicircular, and angular, may be given to the hard blocks, so as to produce compartments with outlines of various figures. To prevent the plastic concrete with which the compartments are filled from adhering or uniting to the surface edges of the hard-formed blocks, and to enable either to be disengaged, removed, and replaced without disturbing the surrounding blocks, the edges of the said blocks are moistened with water and powdered steatite, or an equivalent powdered substance, sprinkled or applied thereon, as in my former Letters Patent, while the same are in position, but before the plastic concrete is placed in the compartment.

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

1. The method of forming concrete pave-

ments by first molding and indurating concrete blocks for handling and then arranging them in position so as to form compartments and filling said voids or compartments with plastic concrete, in the manner substantially as described.

2. Arranging, upon a bed or a layer of concrete, molded indurated concrete blocks or stone blocks so as to create compartments to receive plastic concrete, substantially as and for the purpose specified.

3. Moistening the surface of molded indurated concrete blocks or stone blocks with a liquid, and coating the same with powdered steatite, or an equivalent powdered substance, as and for the purpose specified.

To the above I have signed my name this 11th day of January, A. D. 1872.

GEORGE H. MOORE.

Witnesses:

JAMES L. NORRIS,

W. J. PEYTON.