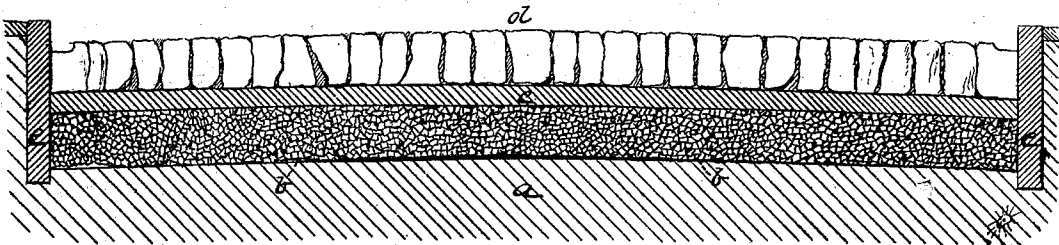


T. D. OWENS.  
Stone Pavements.

No. 143,587.

Patented Oct. 14, 1873.



Witnesses { James L. Kay  
H. C. Henderson, Inventor Thomas D. Owens  
by Bakewell Christy, Clerk  
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# UNITED STATES PATENT OFFICE.

THOMAS D. OWENS, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN STONE PAVEMENTS.

Specification forming part of Letters Patent No. **143,587**, dated October 14, 1873; application filed September 9, 1873.

### *To all whom it may concern:*

Be it known that I, THOMAS D. OWENS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Pavement; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, which represents a sectional view of my pavement.

My improved pavement is made in the following way: First, an excavation of suitable depth is made, in which I fill a layer of broken stone of any desired depth, and upon this place a layer of fine sand. Set in and upon the sand I build a stone pavement similar to a dry wall of ordinary construction, the stones of which are held together by a lime cement of ordinary composition. The first layer—namely, the broken stone—forms a dry bed, on which the pavement proper is placed. It operates to drain the surrounding earth. The second layer forms a bed to receive the pavement proper. The stones which compose the upper layer are such as are ordinarily used in the construction of dry walls.

To enable others skilled in the art to make and use my improvement, I will describe it more fully.

The layer *a* indicates the earth at the bottom of the excavation. Having made the excavation, I roll the bottom *a* with an ordinary roller of suitable weight, for the purpose of compacting and hardening it; then upon this bed I place a layer, *b*, of broken stone of any suitable description, which is in depth from six to twelve inches. This layer is also rolled. Upon the layer *b* I place a layer, *c*, of fine sand, varying from three to six inches in depth. On

the layer *c* I place a layer, *d*, of stone-work. This layer I make in the same way as a dry wall. It is formed of thin flat stone set upon edge, and, after it is completed, I fill the interstices with a cement which is composed of the following ingredients: One part of cement, one part of slaked lime, and six parts of sand or ashes. After putting this cement in the interstices and on the surface of the upper layer *d*, it is rendered smooth and even by pounding in the ordinary way. This operation causes the lower edges of the stones which form the layer *d* to be driven into the layer *c* and embedded there. The layer *c* in time becomes solidified by the lime from the cement between the stones composing the layer *d* working down into and uniting with it. The layer *b* operates as a drain to carry off the water from the surrounding earth. The pieces *e e* represent the curbs.

The pavement thus formed unites in its structure all the elements which are necessary for its preservation, is cheap in construction, and in a short time becomes extremely solid.

It is composed of materials of the most durable and indestructible nature.

What I claim as my invention, and desire to secure by Letters Patent, is—

The within-described pavement, composed of a bottom layer of broken stone, an intermediate layer of fine sand, and a top layer of stone-work, the interstices of which are filled with a suitable cement or bond.

In testimony whereof I, the said THOMAS D. OWENS, have hereunto set my hand.

THOMAS D. OWENS.

Witnesses:

SAMPSON BROOKES,  
T. B. KERR.