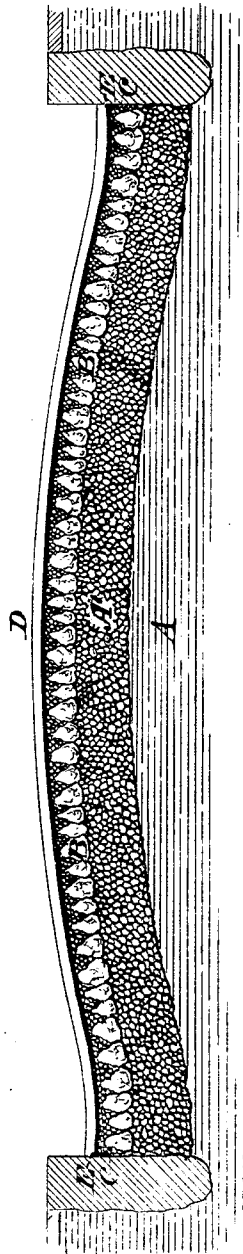


H. WIBBEN.
CONCRETE PAVEMENT.

No. 185,609.

Patented Dec. 19, 1876.



Attest:
John Madigan
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UNITED STATES PATENT OFFICE.

HEINRICH WIBBEN, OF LOUISVILLE, KENTUCKY.

IMPROVEMENT IN CONCRETE PAVEMENTS.

Specification forming part of Letters Patent No. **185,609**, dated December 19, 1876; application filed May 31, 1876.

To all whom it may concern:

Be it known that I, HEINRICH WIBBEN, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Building up Pavements; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of pavements that are commonly called "asphalt" pavements; and it consists in an improved construction and combination of the several strata or layers by which the pavement is built up, the object of my improvement being to produce a pavement that shall combine durability, smoothness, and elasticity with cheapness of construction.

In the drawing, A represents the road-bed, which, after grading, I cover with an even layer of bound gravel, A', of from ten to twelve inches in thickness. Upon this bed of gravel I then place stones or bowlders, B, of even size, which are laid with their large ends downward, and fitted neatly to each other upon the gravel bed, with their smallest or pointed ends upward. The cavities thus formed between the pointed ends I fill with small stones or large gravel, after which the whole is rammed, and rolled with a very heavy roller. A mixture of coal-tar and pitch, in equal proportions, is then poured over the stones and gravel while hot, and is covered, before cooling, with an even layer of one inch of sharp gravel sand, after which the whole is rolled, and the pavement is finished.

It will be observed that I use the tar and pitch compound by pouring it smoothly upon the gravel and stones, and then placing another layer of sand on top of it, while it is still in the plastic state, thus forming an intermediate water-proof and elastic cushion between the bed of the pavement and the

top dressing, as shown in the drawing, where C represents the small stones or gravel placed and rammed into the cavities of the pointed stones B. E is the cushion of tar and pitch, and D is the top dressing.

The advantages of my improved method of building up stone pavements are, that the small or pointed ends of the stones B pointing upward, and the large ends downward, they are not apt to slip out of their places, and will, therefore, prevent the formation of ruts or holes in the street. The small stones or gravel C, being rammed firmly down into the cavities, will act as wedges upon the larger stones B, forcing them close together, and causing them to remain securely in their places.

The coal-tar and pitch, besides acting as a cushion, firmly unite and glue the underlying strata together, so as to form one solid and compact mass.

I am aware that bitumen and bituminous compounds have been used extensively in the construction of pavements by mixing with sand or gravel, with or without the addition of lime or cement, and thus producing an artificial asphalt; but this I do not claim or use, the pitch and coal-tar used by me being spread, unmixed, upon the gravel layer C, so as to form a water-proof and elastic cushion between the lower layers and the top dressing D; nor do I claim, broadly, a pavement consisting substantially of coarse and small broken stones laid upon gravel or earth for a foundation, and bound together by cement, lime, and coal-ashes, or sand, as shown and described in the patent to W. W. Hubbell, No. 115,475, dated May 30, 1871, and reissued December 28, 1875, No. 6,826; but

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The improved method of building up stone pavements, herein described, consisting in, first, grading the road-bed A, then adding an even layer of bound gravel, A', then placing pointed stones B upon said layer, then

filling the wedge-shaped interstices between said stones with smaller stones or gravel C, then ramming and rolling the bed thus formed, then covering the whole with a layer of hot coal-tar and pitch in equal proportions, and then adding a top dressing, D, of sharp gravel sand, after which the whole is rolled, substantially in the manner and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HEINRICH WIBBEN.

Witnesses:

WM. LOW,
JOHN H. THIERMAN.