

84. ROADS AND PAVEMENT

20 UNITED STATES PATENT OFFICE

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IMPROVEMENT IN ASPHALTIC PAVEMENT.

Specification forming part of Letters Patent No. 88,746, dated April 6, 1869.

To all whom it may concern:

Be it known that I, SAMUEL R. SCHARF, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful Improvement in Asphaltic Pavement; and I do hereby declare that the following is a full and exact description thereof.

My invention consists in a peculiar novel method of making a pavement, and also in a new composition of matter for the same purpose.

My improved asphaltic pavement is made in the following manner: The surface or bed of the pavement being graded, and the curb-stone set, if required, the ground is well rolled or otherwise packed, so as to afford a firm surface for the pavement to rest upon. If the ground is wet, it may be covered with coal-ashes, and then rolled. This bed may next be covered to the depth of two inches with gravel, coal-cinders, broken oyster-shells, or other indestructible materials, first moistened with coal-tar, or composition containing coal-tar, but not sufficient to run off. This, being raked to the proper grade, should be well rolled down, thus forming the foundation of the pavement. A drying-pan is now filled with sifted coal-ashes and sand, mixed in about the following proportions: Say, one-fourth to one-half ashes, and one-half to three-fourths sand, according to the quality of the sand, coarse and clean sand requiring more ashes than fine sand, or that containing clay or fine earthy matter. When this mixture is dry and hot, it is thoroughly moistened, but not wet, with a composition hereafter to be described, and the whole properly mixed, so as to have the consistency and somewhat the appearance of new-made sugar. The mixture thus prepared is spread about two inches in thickness over the first coat or foundation above described, and well rolled down, a small quantity of finely-sifted ashes being applied after the first rolling, in order to prevent the roller from sticking, and also to give a smooth surface.

The composition above mentioned is prepared as follows: Remove from coal-tar the volatile oils by distillation, and then take of this prepared coal-tar, twenty gallons; gum-asphaltum, ten pounds; calcined plaster or hydraulic cement, two or three gallons; litharge, two or three pounds.

The gum-asphaltum, being put in a kettle, is melted by heat; then the prepared coal-tar is added, and when both are well mixed and melted the other ingredients are added, and the whole thoroughly mixed together by stirring, when it is ready to use, as above described.

Hydraulic cement is better than plaster for outdoor work, or where it is necessary to have the pavement harden rapidly for rough use.

For rat-proofing between joists, the gravel and coal-tar may be used for base, as above described, and this base covered with sand and ashes mixed with coal-tar, omitting the other ingredients.

Pavements or walks made as above described are impervious to water, and smooth, yet not slippery. They are always free from grass, and never become green or mossy, even in the shade. They are also free from all sorts of insects, and not affected by frost. They are very firm and solid, and will bear rough use.

For ordinary pavement, the thickness need not exceed three inches; but for rough use, or for storage and support of very heavy articles, the pavement should be much thicker; also, more or less hydraulic cement may be used, according to the hardness required.

Having thus fully described my invention, I claim—

The above-described pavement, made with the composition substantially in the manner set forth.

SAML. R. SCHARF.

Witnesses:

G. W. DAVIS,
SARAH E. SPARKS.