

UNITED STATES PATENT OFFICE.

JOHN W. SMITH, OF WASHINGTON, D. C., ASSIGNOR TO JOHN C. PEDRICK
AND BENJAMIN FENNER OF FIVE-EIGHTHS INTEREST.

IMPROVED CONCRETE COMPOUND FOR PAVEMENTS, &c.

Specification forming part of Letters Patent No. **96,984**, dated November 16, 1869.

To all whom it may concern:

Be it known that I, JOHN W. SMITH, of the city of Washington, in the District of Columbia, have invented a new Concrete Composition, which is adapted for the paving of streets, for the manufacture of artificial stone, for flagging, for carriage-steps, for the making of rollers as a substitute for iron in rolling concrete for pavements, and for other useful purposes for which the same may be found adapted.

The nature of my invention consists in mixing coal-tar, pitch, or asphaltum and sulphuric acid with clay, sand, gravel, broken stone, gypsum, cement, salt, alum, and sal-ammoniac, all in a dry state.

To prepare my new concrete, I proceed as follows: I take about forty gallons of coal-tar or pitch, or asphaltum, both or either, or all, and heat until melted. I then, while in a hot state, pour into the mixture about one pint of sulphuric acid, pouring it in gradually and continually stirring the mass.

I also mix the following articles, in about the following proportions, all in a dry state: Six parts of dry clay, raw or burned; six parts dry sand; six parts dry gravel or broken stone; five parts dry gypsum or plaster-of-paris; five parts of cement; four parts common salt; one part of pulverized alum; one part of sal-ammoniac.

These ingredients I add, after mixing to-

gether, to the compound of tar and acid, and well mix or incorporate. I then spread upon the ground while hot, and roll it with a cold roller, sprinkling at the same time with dry earth or dust.

I also prepare the foregoing concrete by mixing the ingredients in their cold state, and lay it down in the street without the application of heat. I also form my concrete into blocks or bricks, with or without the use of molds, and lay these down in a hot or cold state, as desired. I also form my concrete of the consistency of a mortar, to be applied as a mortar with a trowel when desired.

I do not confine myself to the exact proportions herein named, as the requirements of different climates and purposes necessarily involve some variations in the proportions of the ingredients of my compound, and in some cases I leave out the alum and sal-ammoniac, one or both.

I claim as my invention—

The manufacture or preparation of the compound, substantially as herein described, and for the purposes to which the same is found adapted.

JOHN W. SMITH.

Witnesses:

J. C. PEDRICK,
E. McCARTEN.