

UNITED STATES PATENT OFFICE.

THOMAS J. BARRETT, OF BORDENTOWN, NEW JERSEY.

METHOD OF SURFACING ROADS.

1,051,478.

Specification of Letters Patent.

Patented Jan. 28, 1913.

No Drawing.

Application filed August 21, 1912. Serial No. 716,134.

To all whom it may concern:

Be it known that I, THOMAS J. BARRETT, a citizen of the United States, residing at Bordentown, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Methods of Surfacing Roads, of which the following is a specification.

My invention relates to an improved method of surfacing roads.

The object of my invention is to provide an improved method of surfacing roads whereby the work may be done quickly and economically.

A further object of my invention is to provide an improved method as stated which will require a minimum amount of machinery or special appliances.

A further object of my invention is to provide an improved method as stated whereby the work may be accomplished without previously mixing and heating the substances of which the surface composition is formed.

Other objects will appear hereinafter.

In carrying out my invention, I prefer to apply the aggregate directly to the road-way, cold and preferably without previous treatment, although if preferred the aggregate may be previously sprayed with a flux or binder, although this may be omitted and I prefer to omit such treatment. After the coarse aggregate is spread upon the road, preferably to the depth of one to three inches, I apply the asphalt in a fluid state which enters the spaces between the particles of the aggregate, the asphalt being preferably added through a suitable hose. To reduce the asphalt to a fluid state it may be heated or it may be combined with a suitable solvent. If the solvent is used, only enough is employed to reduce the asphalt to a fluid state and if preferred the mixture may be slightly warmed to reduce the amount of solvent necessary to be used. If a solvent is employed I prefer the same to be an inflammable substance in which event, after the mixture is applied to the aggregate I burn out the solvent. The burning out of the solvent not only quickly removes the same so that the asphalt may rapidly set, but it heats the asphalt and the aggregate causing the same to firmly combine.

The use of the inflammable solvent is especially desirable when the aggregate is composed either partially or entirely of

crushed oyster shells as, when the solvent is burned out, the shells are slightly burned to partially reduce the same to lime, and this small portion of lime slowly reacts under atmospheric conditions to harden and improve the road-way with time.

After the fluid asphalt is added to the aggregate, a layer of finely divided solid material is added and the whole is rolled. If the inflammable solvent is employed the finely divided material is added after the solvent is burned out. After the asphalt is added to the aggregate, and before burning, if this latter step is resorted to, a drag or harrow may be passed over the mixture to more thoroughly incorporate the materials, although this is not usually necessary unless the first application of aggregate is in a thick layer.

In laying a new road-way I prefer to first spread a layer of coarse aggregate to the depth of several inches, then apply a sufficient quantity of fluid asphalt to permeate the entire mass, the asphalt being preferably mixed with an inflammable solvent, burning out the solvent, if such is used, then spreading a layer of crushed oyster shells and stone screenings or sand, applying fluid asphalt to permeate the last mentioned layer, then spreading a layer of sand and rolling. In resurfacing old road-ways all of the several steps just mentioned may be employed or some of them may be omitted as found necessary or desirable to suit the conditions of the road.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. The method of surfacing roads consisting in spreading a layer of aggregate on the road-way, adding a mixture of asphalt and an inflammable solvent, burning out the solvent, and spreading a layer of finely divided solid matter.

2. A method of surfacing roads including mixing the aggregate with a mixture of asphalt and an inflammable solvent, burning out the solvent and adding hot bitumen.

3. A method of surfacing roads including mixing the aggregate containing crushed oyster shells with a mixture of asphalt and an inflammable solvent and burning out the solvent.

4. The method of surfacing roads consisting in spreading a layer of coarse aggregate

gate, adding a mixture of asphalt and an inflammable solvent, spreading a layer of finely divided aggregate including crushed oyster shells, applying more asphalt and solvent, burning out the solvent and spreading a layer of finely divided solid matter.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

THOMAS J. BARRETT.

Witnesses:

C. R. ZEIGLER,
CHAS. E. POTTS.