

# UNITED STATES PATENT OFFICE.

GEORGE ARTHUR MITCHELL, ARTHUR JAMES MITCHELL, AND ERNEST EDWIN MITCHELL,  
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## ROADWAY.

No. 876,377.

Specification of Letters Patent.

Patented Jan. 14, 1908.

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*To all whom it may concern:*

Be it known that we, GEORGE ARTHUR MITCHELL, of 192 Barry road, East Dulwich, London, England, builder, ARTHUR JAMES MITCHELL, of 60 Nunhead Grove, Peckham Rye, London, England, quantity-clerk, and ERNEST EDWIN MITCHELL, of 80 Henslowe road, East Dulwich, London, England, builder, have invented certain new and useful Improvements in Roadways, of which the following is a specification.

This invention relates to an improved method of and means for constructing roadways and the like and has for its object to provide roadways, footways and the like which shall be non-slippery and free from dust.

A roadway or the like constructed in accordance with this invention comprises a foundation of concrete on which is laid a composition consisting of granite, asphalt, bitumen, cement, asbestos, carbonate of soda, chalk, sand, shell, which has been previously melted and mixed.

According to one form of this invention the roadway is constructed in the following manner and of materials in the following proportions. The concrete foundation consists of six parts of Thames ballast to one part of Portland cement. Its depth will vary according to the traffic, for instance for heavy traffic the thickness of the foundation would be about six inches, but where the traffic is light this depth may be reduced. The composition forming the surface of the roadway consists of 40 parts of granite broken to pass through a one inch mesh, 30 parts of asphalt, 10 parts of bitumen and approximately equal parts of cement, asbestos, carbonate of soda, chalk, sand and shell to make up the remaining 20 parts. This composition is melted and mixed up in boilers and then spread on the concrete foundation to the required thickness. This thickness will also vary with the traffic to be carried. For instance with heavy traffic where a 6 inch foundation is employed the thickness of the composition surface would be 2

inches. For footways, where the traffic is light the foundation would be say, three inches thick and the composition one inch thick, the foundation and composition being laid as hereinabove set forth with reference to roadways. The proportions used are those which allowing for small variations are found to make the material most resistant to wear, temperature, heat and frost, and to water and make it non-slippery, easy to lay down and at the same time harden quickest when laid.

It is found that when the composition is boiled the soda mixed with the other ingredients causes the laid composition to have a hard and solid surface and it is also found that the asbestos sand and shell mixed with the other ingredients cause the surface of the composition to be non-slippery. The sand should be fine, preferably river sand and the shell should be cockle or other similar hard shells broken quite small. The cement and chalk harden the composition and increase its resistance to heat.

The composition is practically unaffected by any weather and will stand frost and snow and it has been tested to 130 degrees Fahrenheit.

A roadway or the like constructed in accordance with this invention is non-slippery and dustless and the sound of traffic thereon is almost *nil*.

What we claim and desire to secure by Letters Patent is:—

1. A covering for roadways, footways and the like consisting of broken granite, asphalt, bitumen, cement, sand, shell, chalk, carbonate of soda and asbestos.

2. A covering for roadways, footways, and the like consisting of 40 parts of broken granite, 30 parts of asphalt, 10 parts of bitumen, and approximately equal proportions of cement, asbestos, carbonate of soda, chalk, sand, and shell to make up the remaining 20 parts, substantially as set forth.

3. A roadway, footway and the like comprising the combination of a foundation of concrete, and a composition spread on said

foundation, said composition comprising 40 parts of broken granite, 30 parts of asphalt, 10 parts of bitumen, and approximately equal proportions of cement, asbestos, carbonate of soda, chalk, sand and shell to make  
5 up the remaining 20 parts, the ingredients of said composition being previously mixed and boiled, substantially as set forth.

In witness whereof, we have hereunto

signed our names in the presence of two subscribing witnesses. 10

GEORGE ARTHUR MITCHELL.  
ARTHUR JAMES MITCHELL.  
ERNEST EDWIN MITCHELL.

Witnesses:

G. MELVILLE CLARK,  
ALFRED B. CAMPBELL.