

UNITED STATES PATENT OFFICE.

GEORGE ROSS AND STEPHEN F. DEAL, OF KANSAS CITY, MISSOURI.

ROAD-BED.

No. 811,746.

Specification of Letters Patent.

Patented Feb. 6, 1906.

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To all whom it may concern:

Be it known that we, GEORGE ROSS and STEPHEN F. DEAL, citizens of the United States, and residents of Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Road-Bed, of which the following is a specification.

Our invention relates to road-beds; and the object of our invention is to produce a road-bed which is cheap of construction and maintenance, does not become ground up into dust by the wear of traffic, is waterproof, is laid without the use of either subcourse or binder, and is susceptible of long durability.

The first step in laying the road-bed is to prepare the ground by bringing it to a suitable grade, so that it will drain each way from the middle to the sides. It is then rolled with a heavy roller until it is solid and firm, after which the surface of the rolled earth of the road-bed is loosened. This is done by pulverizing the upper layer thereof to a depth of about four inches, more or less. Then we take suitable quantities of crude petroleum, crude carbolic acid, and liquid asphaltum and prepare them as follows: Suppose, for illustration, that one hundred gallons of a mixture of these ingredients is to be made. We take fifteen gallons of the asphaltum and five gallons of the crude carbolic acid and mix them together by agitation and heat the mixture in a suitable vessel to a temperature of 200° Fahrenheit. At the same time we take eighty gallons of the crude petroleum and separately heat the same to a temperature of 150° Fahrenheit. The hot mixture of asphaltum and crude carbolic acid is then poured into the petroleum and the whole is well mixed by agitation. When

thoroughly mixed, this compound is sprayed or otherwise deposited upon the pulverized earth of the road-bed until the pulverized layer is saturated with the compound. During this operation or immediately thereafter the earth and the compound are mixed together by plowing, harrowing, raking, hoeing, or by any other suitable means. When the mixture has been rendered sufficiently homogeneous and uniform, the heavy roller is again run over it, thus making it compact, smooth, and solid, or until the mixture becomes cool.

A road-bed made in the manner specified and with the materials used in the specified proportions and mixed as specified will be cheap of construction and maintenance, will not form dust, will be waterproof, and susceptible of long durability.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The herein-described road-bed, consisting of a rolled and hardened admixture of a layer of natural earth with the following-named liquids: crude petroleum, asphaltum, and crude carbolic acid, in the proportions of, eighty per cent. of crude petroleum, fifteen per cent. of liquid asphaltum, and five per cent. of crude carbolic acid; substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

GEORGE ROSS.
STEPHEN F. DEAL.

Witnesses:

MARY N. HIGDON,
THOMAS W. L. MCGUIRE.