

UNITED STATES PATENT OFFICE.

JOHN B. SWINDLE, OF ARDMORE, INDIAN TERRITORY.

ASPHALTIC COMPOSITION.

SPECIFICATION forming part of Letters Patent No. 790,932, dated May 30, 1905.

Application filed November 1, 1904. Serial No. 230,990.

To all whom it may concern:

Be it known that I, JOHN B. SWINDLE, a citizen of the United States, residing at Ardmore, in the Chickasaw Nation, Indian Territory, have invented certain new and useful Improvements in Asphaltic Compositions, of which the following is a specification.

This invention relates to the treatment of asphalt, and pertains especially to the preparation of asphalt for storing and shipping.

The object of the invention is to provide means for binding, stiffening, or hardening asphalt, so that it may be packed, stored, shipped, or transported without being incased, boxed, barreled, or otherwise inclosed.

As far as known to me it has not been possible to transport or ship asphalt in any form, particularly in bulk or large quantities, without packing it, for example, as usual, in barrels, which adds to the weight and increases the expense of shipping, in addition to the necessary time and labor required in packing. It is therefore my purpose to provide means that will overcome these objections and avoid the difficulties experienced in the ordinary way of shipping asphalt.

With these and various other objects in view the invention consists in adding a mixture of bitumen and lignite to the asphalt while the latter is being partially refined without destroying the usefulness thereof, so that the asphalt may become sufficiently hardened for storing and transportation without packing or casing and without breaking or crumbling.

The invention further consists in first refining the asphalt to a certain degree, then mixing with it sufficient bitumen and lignite to stiffen it, and finally forming the asphalt into cakes or blocks of any desired size or weight for storing or shipping.

In refining the asphalt I do not permit it to become wholly or perfectly refined, only nearly so, or sufficiently so as to condition the asphalt to receive and have thoroughly mixed thereinto the bitumen and the lignite. The mass is then blocked out in cakes, blocks, or rolls of any shape, size, and weight desired, preferably by means of suitable molds, and then permitted to cool and dry.

In practice I have secured best results by using asphalt seventy-five per cent., bitumen twenty per cent., and lignite five per cent.; but this ratio may be varied as found most desirable. In addition to bitumen and lignite forming most acceptable elements for binding or holding the asphalt together in a hard condition I have found that bitumen and lignite assist in the final treatment of the asphalt—that is, in its burning and melting for various uses. This results from the peculiar properties of bitumen and lignite. Hence this asphalt composition is more readily treated preparatory for final use than asphalt without bitumen and lignite.

It will be understood that the mixture of bitumen and lignite performs two functions, to wit: It stiffens and hardens the asphalt and then it forms a fuel for the asphalt.

It is obvious that this composition requires no fuel to melt it, but the blocks have simply to be ignited to fit the composition for use.

For convenience in handling I preferably form the composition into round cakes or blocks in weight from one to five thousand pounds.

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

1. An improvement in the art of treating asphalt, which consists in first partially refining the asphalt, and then adding thereto a mixture of bitumen and lignite in or about the proportions herein specified.

2. A binding and igniting element for asphalt consisting of a mixture of bitumen and lignite mixed with the asphalt during refining of the latter in or about the proportions specified.

3. An asphaltic block or cake comprising seventy-five per cent. of asphalt, twenty per cent. of bitumen, and five per cent. of lignite.

In witness whereof I hereunto set my hand in the presence of two witnesses.

JOHN B. SWINDLE.

Witnesses:

M. F. WINFREY,
T. S. MUSGRAVE.