

UNITED STATES PATENT OFFICE.

WALTER E. HASSAM, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO HASSAM PAVING COMPANY, OF WORCESTER, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

PAVEMENT.

No. 912,126.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed August 26, 1907. Serial No. 390,244.

To all whom it may concern:

Be it known that I, WALTER E. HASSAM, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Pavement, of which the following is a specification.

This invention has particular reference to pavements, and the object of the same is to provide a new and improved wearing surface which shall possess the necessary qualities to make a smooth and enduring structure.

The invention is particularly adapted to provide a surface layer which can be used on any desired foundation, and particularly on the foundation described and claimed in patent granted to me on the first day of May, 1906, No. 819,652.

Various compositions have been proposed for paving and similar purposes, involving mixtures of asphalt and the like with liquid volatile solvents, and with other materials added for the same purpose. On account, I think, of the variable nature of such products, it has been found impossible in practice to combine them in such a way as to get an absolutely uniform product. In other words, when these compositions have been blended at different times in exactly the same proportions and apparently with exactly the same treatment, compositions have been produced of widely varying characters. Sometimes when a pavement has been laid that is of a durable quality capable of lasting for several years, another pavement prepared and laid in the same way so far as can be ascertained, will last only a year or two.

The principal object of the present invention is to provide a composition and process of making and treating it which will be absolutely uniform under all conditions when mixed in the same proportions and in the same way. This is accomplished by a mixture of hydroline with tar-pitch and sand in certain proportions with or without the addition of tar.

The invention is practiced as follows:—I first prepare a mixture with tar pitch and sand of hydroline which is a commercial article solid at ordinary temperature, which softens at about 206° F., and is of uniform structure, and which is of nearly pure bitumen, and a bi-product of the distillation of asphaltic petroleum, in about the proportions of 40 to 50 per cent. of hydroline, about 40

per cent. of coal tar pitch, and from 10 to 20 per cent. of sand. This compound is then thoroughly mixed with graded stone. This is done while the mixture is hot. When the graded stone is thoroughly coated with the mixture, the same is spread upon the foundation and is rolled to give a smooth surface. Usually fine stone and gravel is also spread and rolled thereon. When the same sets, an admirable pavement wearing surface is formed which is smooth and which will stand much wear. In some instances I add to the mixture a percentage of tar, preferably coal tar, of about 20 per cent. of the mixture of hydroline, coal tar pitch and sand. I also preferably employ a fibrous binding agent to assist in holding the composition together, and of such a nature that it will not rot or deteriorate when exposed to the weather as it must be when the composition is used for pavements. Asbestos is the fibrous material which I prefer to use. It is mixed with the above described composition, either having the tar therein, or not, in suitable proportions, and when the mixture has set it acts to bind the parts together to prevent the cracking of the pavement.

The proportions herein mentioned may be varied within certain limits, but I have found in practice that if varied within wide limits, the above mentioned uniformity will not be obtained. In other words, it is necessary to have about the percentage of hydroline which has been referred to above in order to secure a product which will always be the same.

Having thus fully described my invention, what I claim and desire to secure by Letters-Patent is:—

1. The method of making a top or wearing surface for pavements which consists in mixing hydroline, coal tar pitch and sand in substantially the proportions specified, heating the mixture, mixing graded stone in the same while hot, spreading the coated stone on a suitable foundation, and rolling the same to give a smooth surface.

2. A pavement having its wearing surface formed of graded stone coated with hydroline, pitch, and sand in substantially the proportions specified, said coated stone being spread out and rolled to form a wearing surface.

3. A pavement having its wearing surface formed of stone coated with a mixture of

hydroline, pitch, sand, and a fibrous binding material in substantially the proportions described.

4. A pavement having its wearing surface
5 formed of stone coated with a mixture of hydroline, pitch, sand and asbestos in substantially the proportions described.

5. A pavement having incorporated there-
in a mixture of hydroline, pitch, sand, and
10 tar in substantially the proportions de-
scribed.

6. A composition for pavements and the like, comprising sand, pitch, and over 40% of hydroline.

In testimony whereof I have hereunto set 15
my hand, in the presence of two subscribing
witnesses.

WALTER E. HASSAM.

Witnesses:

ELIZABETH M. BARR,
EDWARD E. JOHNSON.