

UNITED STATES PATENT OFFICE.

CHESTER W. M. SMITH, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN COMPOSITION BLOCKS FOR PAVEMENTS, &c.

Specification forming part of Letters Patent No. 130,949, dated August 27, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, C. W. M. SMITH, of San Francisco, in the county of San Francisco and State of California, have invented an Improvement in Street-Pavements; and I do hereby declare that the following is a full and exact description of the same.

The object of my invention is to provide an improved pavement for streets that will be impervious to the influence of the weather and of great durability.

It is a well-known fact that many of the devices for street-paving are ineffectual from various causes, among which are the following, namely: In wood, such as shrinking and swelling and rapid decay of the blocks, which no previous preparation has yet been found to prevent. In composition pavements the defects have, in a measure, been overcome, yet the slackening of the substances, by the action of the elements and the constant travel and wear, cause it soon to crumble; and a radical defect is found in the utility of composition pavements.

But in the use of my improved pavement it is intended that these objections shall be overcome, consisting, as it does, of asphaltum or a bituminous substance and pulp made from wood, the union of which is so formed that it will not be affected by heat or cold or easily worn out by travel.

In the first place I pulp the wood, or cut it up into coarse sawdust, which can be done with a gang of saws so arranged as to cut the timber crosswise or diagonal to the fiber, as this would seem to be essential so as to avoid splinters. The dust or chips may be from one-

half to one inch in length, and possibly longer, but my experiments have not been so extended as to fully determine the precise length; yet I would avoid unnecessary lengths, so as to prevent stubs from protruding in case the surface of the block or pavement should wear away and expose them. But this objection may be overcome, and a finer pulp be employed, if necessary; and with this end in view I would pass the chips or bits of wood through a crushing or grinding mill and a picker, and in this way old blocks of wood which now serve for street-pavements, and which have become worn out and useless, may be utilized.

The pulp-dust or chips so formed are now placed in a kettle or tank of boiling asphaltum, or a substance having similar properties, and thoroughly incorporated by boiling, when the pulverized rock is added in quantity sufficient to stiffen the mass, if found necessary, and also thoroughly mixed by stirring, after which the product is pressed into blocks of the desired dimensions by hydraulic pressure or otherwise, and laid down after the manner of constructing pavements with other blocks of composition or wood.

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

A pressed paving-block formed of pulped wood and asphaltum, as described.

In witness whereof I have hereunto set my hand and seal.

CHESTER W. M. SMITH. [L. S.]

Witnesses:

PHILIP MAHLER,
JOHN L. SMITH.