

UNITED STATES PATENT OFFICE.

AUSTIN WALRATH, OF NEVADA CITY, CALIFORNIA.

PAVING, ROOFING, AND BUILDING COMPOUND.

SPECIFICATION forming part of Letters Patent No. 342,852, dated June 1, 1886.

Application filed November 19, 1885. Serial No. 133,358. (No specimens.)

To all whom it may concern:

Be it known that I, AUSTIN WALRATH, of Nevada City, county of Nevada, State of California, have invented Improvements in Paving, Roofing, and Building Compounds; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object the production of a new pavement, roofing, and building material or compound which possesses in a superlative degree all those qualities which are recognized as being necessary in material to be used for those purposes.

The base of my compound is a new natural product which has recently been discovered near Santa Cruz in California. This substance or material is found in the shape of a deposit or mine, and is called "bituminous sand-rock," and no other deposit of such material has ever been discovered within my knowledge. The material or substance seems to have once been a sandstone, but by some process of nature it became saturated with petroleum-oil, and possibly other substances, so that in its crude state it presents a dark granular appearance. It is tough, flexible, and tenacious, and has a strong smell of petroleum. By subjecting it to heat the oil can be driven off, and it then becomes hard, like iron, and upon the application of fire to this iron-like substance gases escape, which burn with a blue flame, leaving nothing but sand as a residue.

To manufacture my paving, roofing, and building compound, I take this bituminous sand-rock and heat it by means of steam in a suitable vessel, which may be either open or closed. When sufficiently softened by the steam, it will be in a semi-liquid condition, so that it can be spread by suitable raking implements in a thin course or layer over the surface to be paved or roofed. I then roll and

smooth it down with heated irons until it has become firm, and until the water which it has taken up from the steam and the volatile part of the oil have evaporated, which will leave a firm, hard, but elastic surface that will wear a great length of time.

For building purposes, and for one class of paving, I convert the bituminous sand-rock into bricks or blocks of the desired size. In this case I treat the sand-rock with steam, as above specified, and in addition I add some earthy or mineral substance—such as sulphate or carbonate of lime—so as to give it density and body, and then I subject it to pressure in molds, thus forming blocks or bricks, which can be used for paving or building purposes.

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

1. The process of treating bituminous sand-rock with steam, for the purpose above described.

2. The process of forming pavements or roofs of bituminous sand-rock which consists in softening the rock by treating it with steam and rolling or ironing it with hot irons to a firm surface, substantially as described.

3. Bricks or blocks for paving and building purposes, composed of bituminous sand-rock softened by steam and mixed with earthy or mineral substances and subjected to pressure in molds, substantially as described.

4. A paving-composition consisting of bituminous sand-rock softened by steam, substantially as described.

In witness whereof I have hereunto set my hand.

AUSTIN WALRATH.

Witnesses:

M. G. LOEFLER,
ED. H. COLEMAN.