

UNITED STATES PATENT OFFICE.

HENRY F. WILLIAMS, OF SAN FRANCISCO, CALIFORNIA.

COMPOUND FOR PAVING, ROOFING, AND BUILDING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 446,654, dated February 17, 1891.

Application filed October 23, 1890. Serial No. 369,093. (No specimens.)

To all whom it may concern:

Be it known that I, HENRY F. WILLIAMS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Composition of Matter to be Used for Paving, Roofing, and Building Purposes; and I do hereby declare that the ingredients used and the manner of mixing or compounding them to make the said composition of matter, together with the manner of using the same, are fully set forth in the following specification.

My invention consists in treating natural asphalt of commerce in such a manner as to reduce it and obtain the bitumen therefrom in a pure or nearly pure state and then mixing an emollient with such product to render it flexible and tenacious, not unlike india-rubber, and so that it can be spread into sheets for roofing purposes or remelted and treated to or mixed with earthy material to form pavements or pressed into blocks for building purposes. To this end I employ a suitable tank or caldron into which is placed the crude asphalt of commerce and the temperature raised to a melting or boiling point, while the necessary agitation is kept up by stirring until the residuum is liberated from the bitumen and allowed to settle in the bottom of the tank, when the liquid or refined bitumen is drawn off, leaving the residuum in the bottom of the kettle. To this liberated and refined bitumen I add to every one hundred pounds' weight three pounds of refined lard or lard-oil, intimately mixing it with the product by agitation or stirring while in a heated or melted condition. If, however, the product so produced contains less than sixty per cent. of bitumen, the quantity of lard may be reduced and one pound of lard for every twenty per cent. of pure bitumen contained in the product will answer a very good purpose. Of all the oleaginous and fatty matters employed

by me in making tests with my compound, refined lard or lard-oil is preferable, as this imparts to it the necessary flexibility, and the condition of the material so compounded has undergone no change during the period of about six months covering my experiments. As thus prepared, and at a temperature of about 300° Fahrenheit, the product is poured onto canvass, in which condition it will run along the fabric and form a sheet or film of the desired thickness when cool without the necessity of pressing or running through rollers to harden or render the surface smooth; or the product is placed in barrels, packages, or boxes, or formed into blocks for transportation from place to place for constructing pavements or building-blocks, when it is remelted and the necessary infusorial earth in sufficient quantity—such as the silicates or silicious matter (clean sharp sand will answer)—is mixed with it to produce the required consistency or stiffness to spread on the street, in which condition it is tamped or rolled down upon the road-bed to form pavements; or the product may be pressed into blocks of the required dimensions and induration for building purposes.

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

1. A compound consisting of a combination of asphalt and refined lard or lard-oil, substantially as herein set forth.

2. A roofing, paving, and building compound consisting of a combination of refined asphalt, refined lard or lard-oil, and infusorial earth, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

HENRY F. WILLIAMS. [L. s.]

Witnesses:

C. W. M. SMITH,
CHAS. D. WHEAT.