United States Patent Office.

JOSEPH V. DOUGLAS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JAMES A. CRAIG, OF SAME PLACE.

Letters Patent No. 107,232, *dated September* 13, 1870.

IMPROVED ROOFING-COMPOUND.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JOSEPH V. DOUGLAS, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and improved Roofing-Composition; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to preparations for making a water-proof roof, and consists in a compound formed of iron scales, which are produced principally in rolling-mills by the combined action of heat and pressure, and united to such a proportion of tar, or other water repellant, as will firmly connect and cohere said scales, and produce a uniform and homogeneous coating over the roof. These scales possess two peculiar characteristics not observable in filings, turnings, or other waste of iron, namely, that they are nearly unoxydizable by moisture, and require a much higher degree of temperature to melt them than other iron offal.

The scales and tar may be conjointly employed in any suitable way, as my invention does not consist in the manner of applying this compound, but in the thing itself, however applied.

The mode which I preferably employ, at the present time, is to mix the scales intimately with hot liquid tar and apply it directly to the roof in one or more coats, as may seem desirable. The scale will naturally fall into place and exhibit an incline corresponding to the pitch of the roof.

Iron borings, turnings, filings, and pulverized ore have been employed and patented heretofore in combination with various other ingredients, but they lack the form and peculiar adaptation to the purpose in view, which is possessed by the principal article in my compound.

The first three curl up; have a tendency to stand erect on their transverse edges, and cannot be made to lie smooth upon the face of the roof. This constitutes a very serious objection to them. Under these circumstances, they form slight ridges in which the water rests, and is afforded an opportunity to work through. The ground ore is granulated, and, consequently, open to the same objection as sand, namely, that it will be gradually washed out by the operation of heavy rains, while the atoms or pieces do not present a continuous slope to shed the water.

These rolled scales are so condensed by heavy pressure as to have a high specific gravity, and to be in sheets like slate or shingles. The water is thus enabled to pass freely without any obstruction over the smooth surface formed.

Having thus described all that is necessary to a clear understanding of my invention,

What I claim as new, and desire to protect by Letters Patent, is—

A surface coating for roofs, formed of rolled iron scales, applied in hot liquid tar and in one or more successive coats, as set forth.

JOSEPH V. DOUGLAS.

Witnesses:

ALEX. COLVILLE,

B. F. JARRETT.