

# UNITED STATES PATENT OFFICE.

A. H. EMERY, OF NEW YORK, N. Y.

## IMPROVEMENT IN THE MANUFACTURE OF PITCH.

Specification forming part of Letters Patent No. 49,248, dated August 8, 1865.

*To all whom it may concern:*

Be it known that I, A. H. EMERY, of the city, county, and State of New York, have invented a new and Improved Process of Manufacturing Pitch from Pine Wood; and I do hereby declare the following is a full and exact description thereof.

The nature of my invention consists in so regulating the heat around and through the retort in which the wood is being distilled as to drive off the oil and spirits, with a portion of the tar, from the rosin and tar which are formed by the distillation, and leave the pitch in the bottom of the retort.

To enable others skilled in the art to make and use my invention, I will proceed to describe the precise process and operation.

Hitherto in the distillation of pine wood rosin has been obtained by some of the operators and tar by all of them; but pitch has been obtained by none of them directly from the wood, though they could, of course, manufacture pitch from this rosin as tar in the usual way.

I manufacture pitch directly from pine wood in a single distillation, the rosin and tar falling from the wood into the bottom of the retort, and there being converted into pitch by having the oil and spirits, together with the light tar, driven off, and leaving the pitch in the bottom of the retort while the wood is being distilled. This is done by heating the retort or still in which the wood is placed on the bottom or on the sides so nearly to the bottom to such a degree of heat that the pitch will be formed of the requisite degree of hardness by

the time the wood is thoroughly charred. The degree of heat required to effect this will depend upon the degree of hardness which it is desired the pitch shall have and the length of time consumed in charring the wood. Of course, the longer the wood is charring the less will be the degree of heat necessary to form the pitch of the desired hardness.

The pitch may be examined occasionally and drawn out whenever sufficiently hard.

The heat, if applied directly to the bottom of the retort, should not be sufficiently great to destroy the pitch, and in general should be so regulated with that around the retort as to give the required hardness of pitch at or about the time the charring of the wood is completed. Toward the latter part of the charring a considerable pitch is formed directly in the wood, and drops therefrom as the heat is continued.

The pitch made by this process is of a very superior quality, while the quantity of the oil or spirits of turpentine and tar, which is driven off is increased, and the coal is entirely freed from tar, and is found to be extremely dense and lustrous.

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

The art of making pitch from pine wood by one distillation.

A. H. EMERY.

Witnesses:

W. A. CRAWFORD,  
C. F. EMERY.