

UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN THE MANUFACTURE OF PYROLIGNEOUS ACID.

Specification forming part of Letters Patent No. **49,247**, 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 Pyroligneous Acid, &c., from Pine Wood; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in the method of using steam in the manufacture of pyroligneous acid, &c., from pine wood, where I use the steam in such quantities and at such times as to produce the best results.

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

In the manufacture of pyroligneous acid from wood heretofore, when either steam or superheated steam has been used, it has been customary to let a continuous and nearly constant supply of steam through the retort or still in which the wood is being distilled until the wood is charred, the temperature of the still or retort being raised sufficiently to destroy the wood as quickly as is practical after distillation commences, and in this case all the steam serves to dilute the acid.

The proper way to use the steam, and the way I use it, is to let the steam on the wood in large quantities at first, which heats it up and dries it rapidly, while the heat is not raised

sufficiently to destroy and char the wood. This process is continued until the wood is thoroughly dried and a large portion of the spirits of turpentine and rosin taken out; after which the heat is raised up sufficiently to commence the rapid charring, when the acid is rapidly formed, the steam being nearly or quite shut off. Of course a small amount might still be let in without materially modifying the results, and if much is used the acid is materially injured, with no corresponding gain in the value of the other products.

I do not claim the use of steam in the distillation of wood; but

What I do here claim, and desire to secure by Letters Patent, is—

The use of steam or superheated steam in the distillation of wood in the manufacture of pyroligenous acid, &c., in those cases in which the amount of steam used is greatly decreased or discontinued during the whole of or a large portion of the time in which the wood is being charred.

A. H. EMERY.

Witnesses:

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