

United States Patent Office.

THEODORE SCHWARTZ, OF NEW YORK, N. Y.

Letters Patent No. 101,320, dated March 29, 1870.

IMPROVEMENT IN TREATING WOOD TO OBTAIN USEFUL PRODUCTS.

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, THEODORE SCHWARTZ, of the city, county, and State of New York, have invented certain Improved Wood Products for Fuel and other purposes; and I do hereby declare the following to be a full and correct description of the same.

The nature of the invention consists in obtaining certain new and useful products from wood by subjecting it to regulated heat in a close chamber, by which I effect the complete expulsion of its moisture, and the browning or darkening of its whole texture without charring.

I have discovered that these results occur in the new process for obtaining acetic acid, which I have devised, in which the temperature to which the wood is subjected is never allowed to rise to a point at which carbonization can take place.

The said process consists in first giving to the wood such form and dimensions as may be desirable, in view of the purposes to which it is subsequently to be applied, then expelling its moisture by subjecting it in a close chamber, to a suitable temperature for that purpose, (say, not exceeding 250° Fahrenheit,) and finally raising it gradually to a temperature (say, not above 450° Fahrenheit) just sufficient to develop and expel acetic acid without charring the wood or reducing it to charcoal.

Wood thus treated comes from the distilling-chamber perfectly dried, browned throughout its entire texture, fully twice as heavy as if charred or carbonized, and possessed of new qualities adapting it for use either as fuel or kindling, for the preparation of superior gunpowder charcoal, and, by reason of the development of color and the perfection of the seasoning, to the manufacturer of cabinet-ware and as imitations of and substitutes for various colored woods.

As fuel it is more profitable than it was in the green state, being divested of all the fluid that would tax and retard combustion and spoil the fire, and affords a stronger and more intense fuel than wood merely desiccated by the ordinary methods.

In the process of preparing the wood as hereinbefore described, the acetic acid which the wood is ca-

pable of yielding is developed and extracted to any desired extent, and I contemplate saving and utilizing it.

Its pecuniary value goes far toward meeting the expense of the treatment of the wood, and reduces the cost of the products to a figure which facilitates their introduction into general use at reasonable prices.

The saving of the acid, however, though important, is not an indispensable part of the preparation of the wood, except in an economic point of view.

To render the kindling or "tinder-wood," prepared by this process less accessible to moisture, and insure the utmost inflammability under all circumstances, I propose to protect it by the application of rosin, as a thin coating or otherwise.

Having thus described my invention,

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

1. As a new article of manufacture, wood, browned or darkened throughout the grain for kindling or fuel, said article, which I call "tinder-wood," being produced by the treatment hereinbefore described.

2. Tinder-wood or kindling prepared as described, and protected from access of moisture, and having its inflammability enhanced by the application of rosin as a coating or otherwise as set forth.

3. Small wood, prepared as described, to be used as an improvement in the manufacture of gunpowder charcoal, as stated.

4. Imitation woods, prepared and colored by the process hereinbefore specified, for use in the manufacture of cabinet-ware and for other constructive purposes.

5. The saving and utilizing of acetic acid developed from wood during the process of treating it as described, for the purposes specified.

The above specification of my said invention signed and witnessed at Washington this 26th day of January, A. D. 1870.

THEODORE SCHWARTZ.

Witnesses:

A. C. BRADLEY,
CHAS. F. STANSBURY.