N. U. CHAFEE.

Turpentine Still.

No. 4,412. Patented Mar. 14, 1846.

Fig. 2.

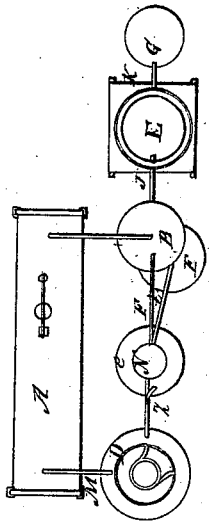
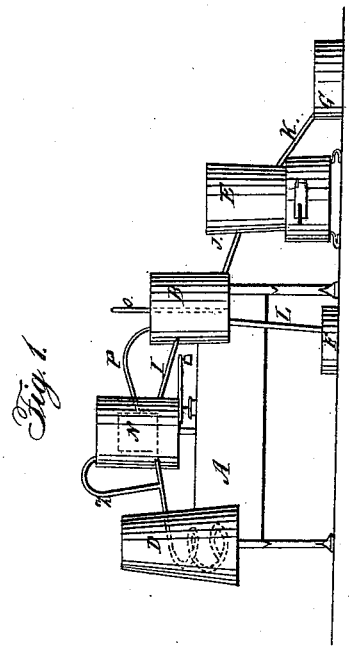


Fig. 1.



UNITED STATES PATENT OFFICE.

NICHOLAS U. CHAFEE, OF CHARLESTON, SOUTH CAROLINA.

IMPROVEMENT IN THE MANUFACTURE OF ROSIN AND SPIRITS OF TURPENTINE.

Specification forming part of Letters Patent No. **4,412**, dated March 14, 1846.

To all whom it may concern:

Be it known that I, NICHOLAS U. CHAFEE, of the city of Charleston, State of South Carolina, have invented a new and Improved Mode of Procuring a White Rosin and a Pure White Spirits of Turpentine from the Gum of Pines or Raw Turpentine, of which the following is a specification.

The nature of my invention consists in the application of steam generated from water in a common boiler, and conducted by wood or metal pipes into a wood still containing the gum, which causes the spirits to rise and pass through a metal heater contained in a second wood still, and from thence to a worm or condenser, from which is produced a pure white spirits of turpentine. After the spirits are off, the gum or white rosin is conducted into a a metal vessel, under which a slow fire is kept until the water is evaporated, when the rosin is transparent or crystallized.

To enable others skilled in the art to make and use my invention, I will here describe its construction and operation.

I construct a steam-boiler, A, of any of the known forms, with gage-cocks and safety-valve, from which I connect first still, B, with from one to three wood or metal pipes, O, (as the size of the still may require,) leading to the bottom of the still, with small holes or avenues at the ends of the pipes, from which the steam escapes and mixes with the gum, and causes the spirits to rise and pass through a pipe, P, at the top, into a heater, N, contained in second still, C, from thence into worm in a condensing-tub, D, out of which is produced a pure white spirits of turpentine, the whole apparatus being represented in the drawing herewith presented. In the second still, C, I first put the turpentine, which, by means of the steam passing through heater N, is melted into a liquid, when it is let down through a spout, I, into still B. I then charge second still, C, with turpentine again, which, from the heat of spirits from still B passing through heater N, causes the spirits in second still, C, to rise in vapor, and pass through pipe Z, into condenser D, with the spirits from still B, and from thence is produced a pure white spirits of turpentine. As soon as the spirits are all off from first still, B, the rosin, which is white, is let off through spout L into rosin-pit F; or, if it is to be clarified, I let it pass through a spout, J, into the clarifier E, (which is a wooden tub with a copper bottom,) under which I keep a slow fire until the water is evaporated, when it becomes clear and crystallized, and is let off through a spout, K, into the rosin-pit G. As soon as the rosin is let out of the first still, B, I let the charge in the second still, C, down into the first still, B. I then proceed and charge second still, C, with turpentine, as before, and so on progressively.

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

The manufacturing of white rosin and white spirits of turpentine from the gum of pines, either dip or scrape, by the application of steam generated from water in a common boiler or still, and conducted through wood or metal pipes into wood or metal still, mixing with the gum, and then passing through a metal heater, as herein described.

NICHOLAS U. CHAFEE.

Witnesses:

GEO. A. LOCKE,

W. BENSON.