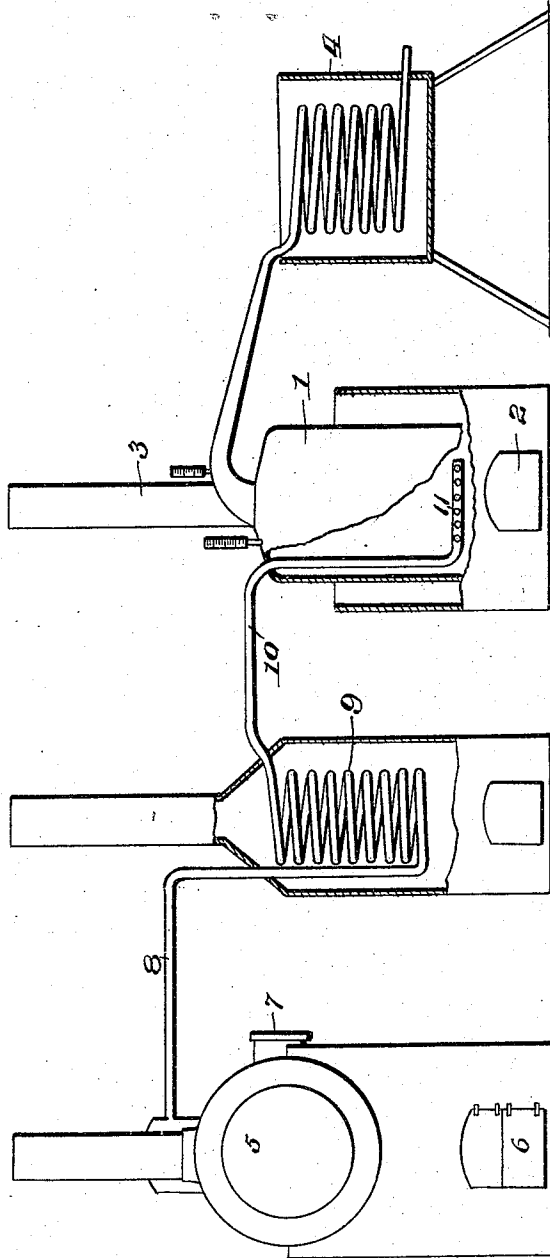


H. M. CHASE.  
PROCESS OF PRODUCING NEW OILS.  
APPLICATION FILED APR. 29, 1916.

1,185,588.

Patented May 30, 1916.



WITNESSES  
*M. Fowler Jr.*  
*Eden Hoodwin*

INVENTOR  
*Harold M. Chase*  
by *A. P. Grady* Attorney

# UNITED STATES PATENT OFFICE.

HAROLD M. CHASE, OF WILMINGTON, NORTH CAROLINA.

## PROCESS OF PRODUCING NEW OILS.

1,185,588.

Specification of Letters Patent.

Patented May 30, 1916.

Application filed April 29, 1916. Serial No. 94,346.

*To all whom it may concern:*

Be it known that I, HAROLD M. CHASE, a citizen of the United States, residing at Wilmington, in the county of New Hanover, State of North Carolina, have invented certain new and useful Improvements in Processes of Producing New Oils, of which the following is a description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to the production from heavy oils and pitch produced by the destructive distillation of resinous wood such as the so-called lightwood of the turpentine producing regions of a new and useful oil having the characteristics of rosin oil.

In the destructive distillation of resinous wood such as the lightwood above referred to there is produced a very desirable amount of heavy oil commonly known as creosote oil and finding its main use in wood preservation at a comparatively low price per gallon.

It is the object of my present invention to produce, by the process of the invention, from this heavy oil or creosote oil, or the pitch which remains after the creosote oil is distilled off, an oil having the general characteristics and useful qualities of rosin oil and having a value per gallon very much greater than that of the creosote oil or pitch from which it is produced.

With this object in view, my invention consists in the process hereinafter described and particularly pointed out in the claims.

Referring to the drawings: the figure is a diagrammatic view of an apparatus adapted to carry out the process of my present invention.

In the drawings, 1 represents a still or retort, which may be of any desired shape or size and is arranged to be heated by a furnace 2, the product of combustion passing upward and out through smoke stack 3. The creosote oil or pitch to be treated is placed in this still or retort and subjected to the heat of the fire in the furnace 2. A pipe 3 leads from the still or retort 1 to a worm or condenser 4, in which the vapors driven off by heat are condensed.

5 indicates a steam generator heated by furnace 6 and provided with the usual pressure gage 7. From this steam generator a pipe 8 leads to a superheater 9, and from the superheater a pipe 10 leads to the still 1, within which the pipe 10 is extended to the

bottom of the still, where it terminates in a perforated pipe 11.

In carrying out my process the creosote oil or pitch is subjected to dry heat in the still and at the same time dry steam preferably superheated is introduced through the pipe 10 and perforated pipe 11. This introduction of steam prevents the burning or cracking of the oil or pitch. The first vapors pass off at about 98 to 100 degrees centigrade, and from that temperature up to about 128 degrees centigrade the product is a light fractional distillate of no special value. As the temperature is increased to from about 130 degrees centigrade to 200 degrees an oil is produced of an amber or dark color, more or less opaque on account of the presence of water, which on subsequent treatment by heat or otherwise to drive off the water, leaves a clear transparent oil, heavier than water, dark amber in color, having the general characteristics and useful qualities of rosin oil without the bloom which is characteristic of rosin oil. If the heat is run up to from 200 to 250 degrees centigrade, an oil is produced somewhat heavier and darker in color and at heat from 250 degrees up, a still heavier oil is produced and the final residue in the still is a small quantity of very heavy pitch or carbon.

It should be understood that my process is applicable to any of the heavier oils or pitch produced by distillation of resinous wood. The oil produced, if it carries any odor of creosote, may be redistilled and freed from such odor.

Having thus described my invention, what I claim is:

1. The herein described process of producing an oil having the characteristics of rosin oil from creosote oil, pitch or other fluid product of destructive distillation of resinous wood, which consists in subjecting such product to dry heat in a still or retort, introducing dry steam into the retort and maintaining such product at a relatively low temperature to distil off a light oil and subsequently raising the temperature and introducing dry steam into the retort to distil off oil having the characteristics of rosin oil.

2. The herein described process of producing an oil having the characteristics of rosin oil from fluid products of destructive dis-

tillation of resinous wood, which consists in  
subjecting such product to dry heat in a still  
or retort, introducing dry steam into the still  
or retort, maintaining such product at a  
5 temperature not exceeding 130 degrees centi-  
grade to distil off light oil and subsequently  
raising the temperature to above 200 degrees  
centigrade, and introducing dry steam to  
distil off oil having the characteristics of  
rosin oil. 10

This specification signed this 28th day of  
April A. D. 1916.

HAROLD M. CHASE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,  
Washington, D. C."