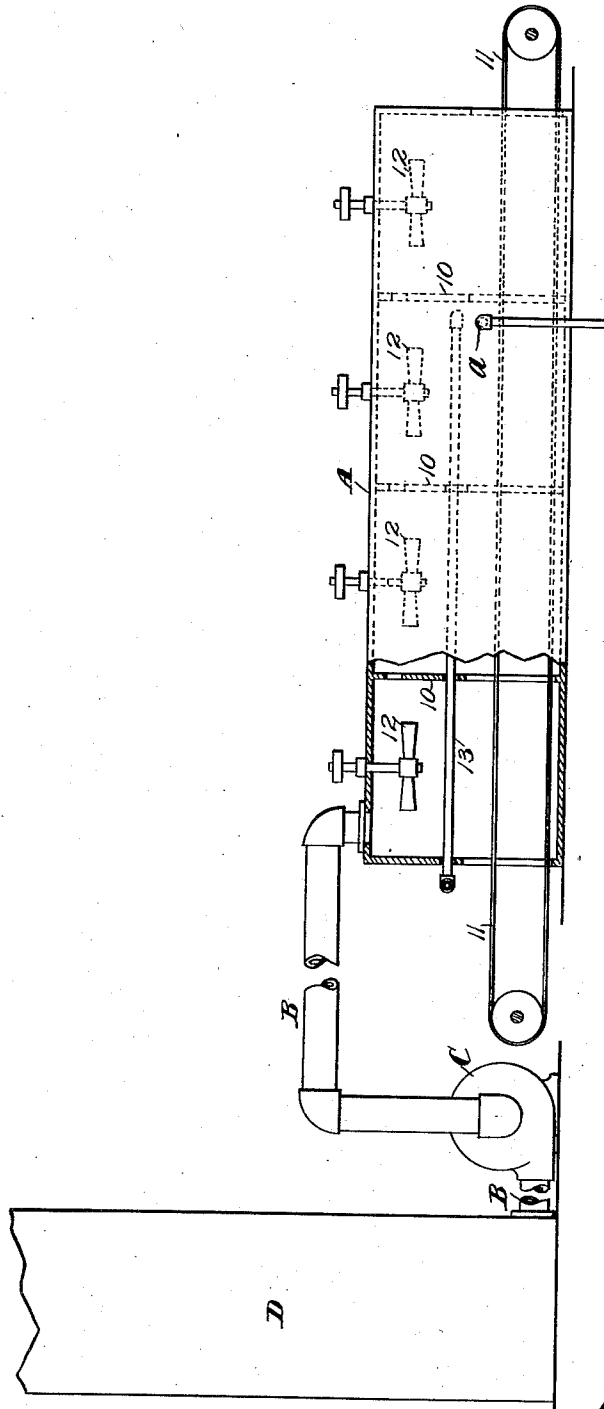


R. G. MEWBORNE.
TOBACCO DRYING AND NICOTIN EXTRACTING PROCESS.
APPLICATION FILED JUNE 1, 1907.

1,039,987.

Patented Oct. 1, 1912.



Witnesses:
A. J. Fournier,
Philip N. Zildan.

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UNITED STATES PATENT OFFICE.

ROBERT GRAHAM MEWBOERNE, OF LOUISVILLE, KENTUCKY, ASSIGNOR TO THE
KENTUCKY TOBACCO PRODUCT COMPANY, A CORPORATION OF NEW JERSEY.

TOBACCO-DRYING AND NICOTIN-EXTRACTING PROCESS.

1,039,987.

Specification of Letters Patent.

Patented Oct. 1, 1912.

Application filed June 1, 1907. Serial No. 376,871.

To all whom it may concern:

Be it known that I, ROBERT GRAHAM MEWBOERNE, a citizen of the United States, residing at Louisville, county of Jefferson, and State of Kentucky, have invented certain new and useful Improvements in Tobacco-Drying and Nicotin-Extracting Processes, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to processes for drying tobacco or tobacco stems or stalks, or other tobacco material, and more especially to such processes in which the drying of the tobacco material is utilized also for obtaining the nicotin or other valuable constituents by condensing or treating the vapors passing off from the tobacco material during the drying process.

The invention has been made in connection with carrying out the process of U. S. Letters Patent No. 730,032, dated June 2, 1903, and will be described in connection with that process, it being understood, however, that the broader features of the invention are not limited to use in connection with the process of said Letters Patent.

In carrying out the process of said Letters Patent No. 730,032, it is desirable that the temperature in the drier should be as high as possible, without injury to the tobacco material or its constituents, not only for the purpose of securing the rapid drying of the material, but because it secures a more efficient extraction of the nicotin and other volatile constituents of the tobacco material, and, in the case of tobacco material that is to be used for fertilizer after drying, a more efficient separation of constituents desired in the fertilizer and in the nicotin extract. With such high temperatures, however, it is found in practice that there is great danger of fire in the drier, and the especial object of the present invention is to permit such high temperatures to be used without danger of fire, and thus secure a rapid and efficient drying of the tobacco material and extraction of the nicotin. I secure this result by the introduction of steam to the drying chamber, steam being admitted in any suitable quantity, so long as there is sufficient to prevent fire occurring in the drier.

The invention may be carried out in apparatus of widely different forms, and the dry-

ing process may be combined with other processes of treating the tobacco material, either before or after drying, and the method and apparatus for treating the vapors may be of any suitable character.

An apparatus of a preferred form for carrying out the invention in connection with the process of Letters Patent No. 730,032, and employing a drier of a common type, is illustrated diagrammatically in the drawing forming a part of this specification, and this apparatus will now be described and the features forming the invention then specifically pointed out in the claims.

In the drawing, A is a tobacco drier of well-known form, having the drying chamber divided into sections, four being shown, and having a cooling chamber at the end, the sections of the drying chamber and the cooling chamber being separated by partitions 10, a conveying belt 11 for the tobacco material running through the drier, and fans 12 for circulating air through the cooling chamber and from the cooling chamber through the drying chamber, the drier being heated by steam pipes 13 extending through the sections of the drying chamber above the conveying belt 11. At the end of the drier opposite the cooling chamber, that is, at the end at which the tobacco material enters the drier on the conveying belt 11, vapor pipe B passes from the top of the drier, the vapor being drawn off by a fan C, on pipe B, and delivered to a condenser or apparatus of some suitable form for carrying out the process of Letters Patent No. 730,032, or otherwise treating the vapors, a tower D being shown, which may be of any suitable condensing tower or gas scrubber construction. At some suitable point in the drier A, preferably in the drying chamber section next to the cooling chamber, and at the point shown, a steam inlet *a* is provided, which is connected with any suitable steam supply. This steam inlet may be placed elsewhere than as shown, and more than one steam inlet for the drier may be used, if in any case found desirable.

While the invention has been described in connection with the employment of a high temperature for the purpose of rapid drying and efficient extraction of the volatile constituents, and the invention is of special value for preventing fires which are liable

to result from such high temperature, the introduction of steam will also avoid the danger of accidental fires from other causes, the steam acting to immediately extinguish them. As such fires are liable to occur in tobacco driers from the friction of moving parts or carelessness of attendants, the introduction of steam is of value even with lower drying temperatures, and the invention is intended to include such use.

What I claim is:—

1. The improvement in methods of drying tobacco material, which consists in subjecting the tobacco material to a high temperature in a chamber through which air is circulated, and admitting steam to the chamber during the drying process.

2. The improvement in methods of drying tobacco material and obtaining nicotine or other volatile constituents from the vapors, which consists in subjecting the tobacco material to a high temperature in a chamber through which air is circulated, admitting steam to the chamber during the drying process, and drawing off and condensing or otherwise treating the vapors from the chamber.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

ROBERT GRAHAM MEWBORNE.

Witnesses:

A. S. MURPHY,
E. S. STEELE, Jr.