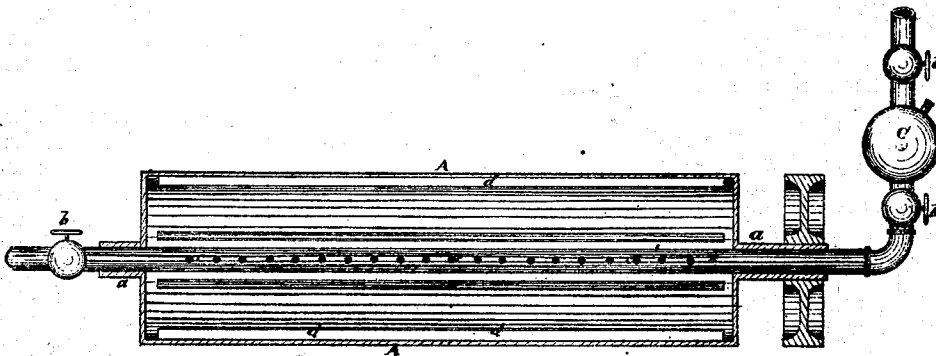


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Improvement in Preparing Tobacco.

No. 123,011.

Patented Jan. 23, 1872.



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IMPROVEMENT IN PREPARING TOBACCO.

Specification forming part of Letters Patent No. 123,011, dated January 23, 1872.

Specification of certain Improvements in Preparing Tobacco, invented by EBEN GOODWIN, of the city, county, and State of New York.

Nature and Object of the Invention.

The first part of this invention relates to the extraction of a portion of the nicotine and all objectionable foreign odors, and the preparation or partial preparation of the tobacco to be worked; and consists in subjecting the tobacco to heat in a vacuum or partial vacuum, as hereinafter more fully set forth. The second part of my invention relates to the completion of the preparation of the tobacco to be worked; and consists in infusing flavoring or sweetening substances or moisture to the tobacco while in vacuum or partial vacuum, as hereinafter more fully set forth.

Description of the Accompanying Drawing.

The accompanying drawing is a vertical longitudinal section of a portion of an apparatus adapted to carry out my invention, though any other apparatus adapted to the purpose may be employed.

General Description.

It is well known that in various kinds of tobacco there is an excess of nicotine for most of the uses to which it is adapted; and it is also well known to tobaccoists that tobacco is often injured by the treatment it receives before it reaches the hands of the tobaccoist, so that it often contains unpleasant foreign odors. In the preparation by the tobaccoists of tobacco for chewing, and in the manufacture of segars, it is necessary to strip the stem from the leaf; and in the mode of working now practiced it is indispensable that the dry leaf shall be moistened before this operation of stripping can be performed. To accomplish this purpose the practice has been to dip the leaf in water or sprinkle it with water, (which sometimes contains flavoring substances or other desirable additions,) and then to lay the tobacco so dipped in heaps or bulk to soak; or, in other words, to allow the water to penetrate it sufficiently to soften the leaf so that the stem can be stripped from it. This necessity involves an unequal distribution of the

moisture in the leaf, and also involves the necessity of an excess of moisture to insure a sufficient dampening of those portions least dampened. The considerable period of time during which the tobacco has to be subjected to moisture in the process now generally practiced, as above described, also causes a considerable oxidation of the extractive matter of the tobacco, thereby affecting it injuriously and reducing its value; and the process now generally practiced also involves a considerable handling, which results in the breaking up of a tender and valuable portion of the tobacco into what is known as scrap, which entails a very considerable loss to the manufacturer.

In carrying my invention into effect, I first put the dry tobacco, as it comes to the tobaccoist, into an air-tight receiver, which may be constructed as shown in the drawing, in which A represents such receiver, which may be made of a cylindrical form, hung upon the bearings *a a*, on which it may be revolved; and it may be provided with a steam-jacket, (not shown) by means of which heat may be applied to it, or the heat may be applied in any other desirable manner. This receiver is provided with a man-hole or holes, through which the tobacco may be introduced, and also has small ledges *d d* to separate the tobacco and turn it over as the receiver revolves. B represents a central pipe, extending through the entire length of the cylinder A and through both of the journals *a a*, and having stop-cocks *b b* to close the connection of either end of the pipe with the receiver A. Said pipe is also provided with apertures *c c* in its sides, connecting from the inside of said pipe to the inside of the receiver A. A common air-pump should be connected to one end of this pipe B, and at the other a reservoir or large cup, C, having double stop-cocks may be attached, for a purpose hereinafter explained.

The tobacco to be operated on having been placed in the receiver A and the man-hole closed, the stop-cock at the end of the receiver opposite the pump being also closed, the air is exhausted or partially exhausted from the receiver A, so as to form therein either an entire or partial vacuum; though a vacuum of seven or eight pounds to the square inch will

probably generally be found sufficient for the purpose, except in extreme cases. A very small amount of steam at a low pressure is then admitted to slightly moisten the tobacco, and then heat is applied to the receiver A till the tobacco is heated to about 150° Fahrenheit, and a slow revolution is given to the receiver A—say from one to ten revolutions per minute—commencing when the heat is applied. The tobacco being thus subjected to heat in a vacuum or partial vacuum, will part with a portion of its nicotine and with any unpleasant odors which may have been contracted in the hands of the planter or packer or in transportation, so that after being thus treated it will be entirely sweet and free from unpleasant odors. Of course the length of time during which the tobacco will require to be subjected to heat in the vacuum will depend much upon the tobacco itself and upon the use for which it is intended; but this part of the treatment should be discontinued as soon as the nicotine in the tobacco is reduced to the desired amount. During the application of the heat and the exhaustion of the air from the tobacco the receiver A should be slowly revolved, so as to turn the tobacco gently over and expose all of it to like treatment; but this revolution of the receiver should be very slow, so as not to break the tobacco into scrap—say from one to ten revolutions per minute. When the unpleasant odors have been removed from the tobacco and the amount of nicotine properly reduced, as above described, flavoring or sweetening extracts, contained in a proper amount of water to moisten the tobacco sufficiently for working, are admitted from the reservoir C, care being first taken to close the stop-cock above so as to exclude the air; and this water and flavoring or sweetening extracts are admitted to the tobacco through the holes *c c*. A quicker motion is now given to the receiver A, so as to carry the moisture entirely through the tobacco; and when this has been done, and the moisture and flavoring extracts have been sufficiently distributed, the tobacco may be removed from the receiver and is ready to be worked.

This invention brings with it several import-

ant advantages. It saves time and labor in the treatment of the leaf; there is less handling of the tobacco, and, consequently, less loss by the making scrap or shorts; there is less loss in stripping the tobacco, because by this treatment the suture between the stalk or stem and body of the leaf is more thoroughly softened, and there is, therefore, less of the leaf taken away with the stem in the process of stripping; the tobacco is prepared in less time and out of contact with the air, which avoids the oxidation of the extractive matter of the leaf which has been heretofore experienced. The introduction of superfluous moisture into the leaf is avoided, thus also avoiding the present lengthy process of drying, and insuring the equal distribution of the proper amount of moisture through the leaf at the time it is worked; and the perfect and thorough manner in which this moisture is by this means made to penetrate every fiber of the leaf makes it practicable to work the tobacco with less moisture, the unpleasant odors which the tobacco is liable to have acquired are removed, and the flavoring or sweetening extracts are made to thoroughly penetrate every part of the leaf. The benefits resulting from this treatment to the hands employed in working the tobacco are considerable, as it saves them from having to endure the poisonous odor of the nicotine which escapes from the tobacco as now treated, this being carried off, by the air-pump, in the chimney.

Claims.

I claim as my invention—

1. The extraction of the unpleasant odors and a portion of the nicotine from tobacco by subjecting the tobacco to heat in vacuum or partial vacuum, substantially as hereinbefore set forth.
2. In fusing flavoring or sweetening substances in the tobacco while in vacuum or partial vacuum, substantially as hereinbefore set forth.

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Witnesses:

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