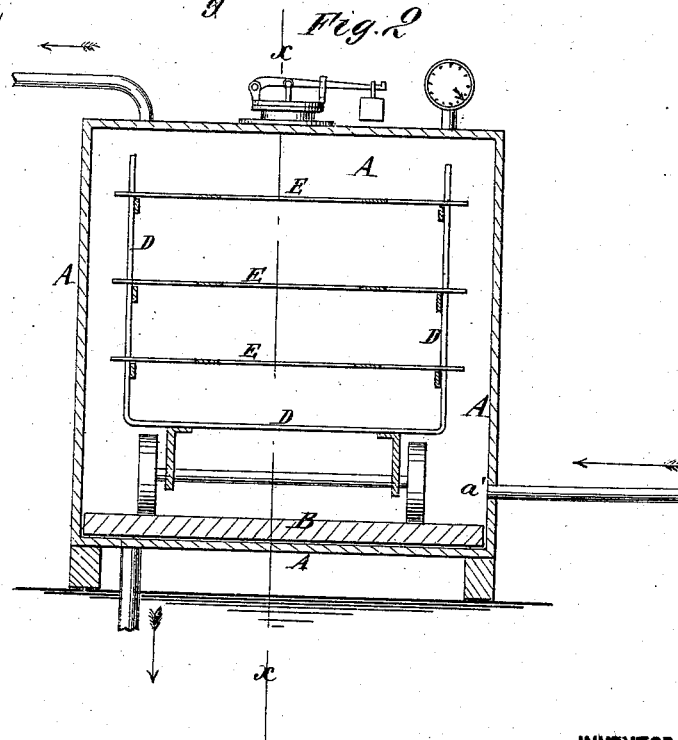
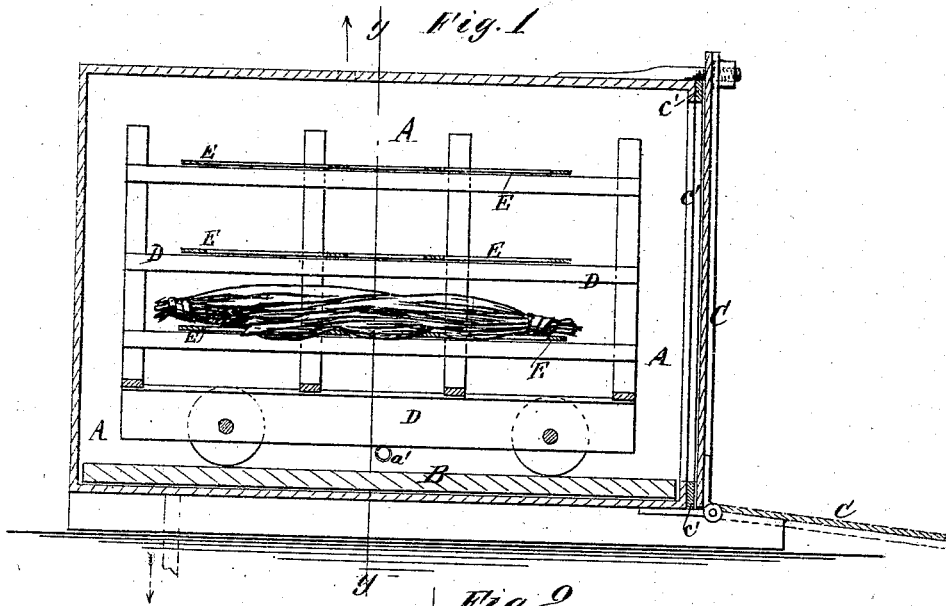


C. S. PHILIPS.

APPARATUS FOR CURING TOBACCO.

No. 182,597.

Patented Sept. 26, 1876.



WITNESSES:

A. W. Amqvist
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UNITED STATES PATENT OFFICE.

CHARLES S. PHILIPS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN APPARATUS FOR CURING TOBACCO.

Specification forming part of Letters Patent No. **182,597**, dated September 26, 1876; application filed June 20, 1876.

To all whom it may concern:

Be it known that I, CHARLES S. PHILIPS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Sweating and Coloring Tobacco, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved apparatus taken through the line *x x*, Fig. 2. Fig. 2 is a vertical cross-section of the same taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

It is well known that a large portion of the tobacco grown never enters into that state of fermentation necessary to fully develop its burning quality, flavor, and dark color, so that it retains its wild rank elements, and its green and yellow leaves, and is therefore unfit for cigar purposes.

By my process such tobacco can be forced to sweat and color, and its quality can be improved, thus reclaiming a large quantity of goods hitherto considered worthless.

In carrying my invention into practical effect, I provide a steam-chest, A, of such a size that it will readily contain an ordinary case of tobacco after it has been unpacked and laid loosely in a square pile. The chest A may be provided with a false bottom, B, and with a loose side or end, C, hinged at its lower edge, so that it may be turned down, as shown in dotted lines in Fig. 1, to serve as a truckway for running the tobacco in and out. The joint between the door C and the chest A is packed with rubber *c*, or other suitable packing, to make it steam-tight.

In the chest A, a little above its bottom, is formed a hole, *a'*, to receive the inlet steam-pipe, which should have a short T-pipe attached to its inner end to prevent the steam from striking the butts of the tobacco directly, to prevent them from becoming too wet, which would cause them to mold after being repacked into the original case.

The chest A is provided with a hole in its bottom to receive a steam-trap, a valve, or a

pipe for drawing off the water of condensation. The chest A is also provided with holes in its top to receive a safety-valve, which should be set to blow off at about five pounds pressure, a steam-gage, and a pyrometer, thermometer, or other instrument to indicate the temperature and enable an even temperature to be maintained.

D is a truck of a shape and size to correspond with the interior of the chest A, so that it may be run out and in readily. The truck D is formed with vertical racks upon its sides, and with detachable racks E to rest upon the longitudinal bars of its side racks.

The case of tobacco to be operated upon is unpacked, and the tobacco, one or more hands at a time, is laid loosely in layers upon the rack bottom of the truck D. If the tobacco be not too dry and brittle, it should be shaken out a little. As each layer rises a little above the horizontal bars of the side racks, one of the loose racks, E, is placed upon it, and so on until the whole case has been transferred to the truck D. Each layer should be moistened with water, sprinkled upon it with a No. 5 garden-sprinkler, or other suitable instrument that will produce a fine spray, from twelve to twenty-four quarts of water being used upon each case, according to the dryness of the tobacco.

In moistening the tobacco, care should be taken to wet the butts as little as possible, as the steam will moisten them sufficiently.

In packing the tobacco in layers upon the truck, care should be taken to lap the lower parts or tips of the leaves well upon each other; otherwise, as soon as the warm moisture penetrates the leaves they will settle down, forming gutters, in which an excess of moisture will accumulate, which will water-stain them and give them an undesirable color, and render them liable to be damaged.

As the tobacco becomes moistened and soft it settles down, and the racks E rest upon the horizontal slats of the side racks of the truck, which prevents the tobacco from packing so closely as to prevent all its parts from being moistened evenly.

When the tobacco has been arranged upon the truck D and properly moistened, the loaded truck is run into the steam-chest A, the door

C is closed and secured steam-tight by bolts or other suitable means, and steam is admitted until it has attained a pressure of from three to five pounds, which pressure is maintained for from five to ten minutes, during which time any excess of moisture that may be contained in some of the leaves, will be vaporized and distributed evenly through the entire mass, and the tobacco will have settled so that the hands press upon each other, and will be in suitable condition to sweat and color. The steam-valve is now nearly closed, only enough steam being admitted to maintain a temperature of from 150° to 200° Fahrenheit for a sufficient length of time to thoroughly sweat the tobacco and bring it to the depth of color desired.

The length of time will depend upon the quality and condition of the tobacco. Generally, from one to two hours will be sufficient.

The condition of the tobacco may be tested by withdrawing the truck and removing a sample from the middle part. If not sufficiently moistened and colored, the truck can be replaced, and the operation continued.

When the tobacco has been treated a sufficient length of time it is removed, and is

ready for stripping. The quality of the tobacco will, however, be improved by repacking it into the case, pressing it down until it occupies a little less space than it did originally, closing the case tightly, and setting it away for three or four days. The tobacco will retain heat for several days, and as long as the moisture lasts it will continue to improve in color and every other desirable quality, but care must be taken not to press it so heavily as to force out the gum and cause it to blacken and cake like plug-tobacco. If it is desired to impregnate the tobacco with any substance, the said substance can be put into the water used for sprinkling.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A steam-tight chest, provided with false bottom B, door C hinged at lower edge, truck D, and racks E, all substantially as and for the purpose specified.

CHARLES S. PHILIPS.

Witnesses:

JAMES T. GRAHAM,
T. B. MOSHER.