

# UNITED STATES PATENT OFFICE.

HERBERT KNOX, OF WAREHOUSE POINT, CONNECTICUT.

## PROCESS OF TREATING LEAF-TOBACCO.

No. 843,538.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed July 8, 1904. Serial No. 215,786.

*To all whom it may concern:*

Be it known that I, HERBERT KNOX, a citizen of the United States, and a resident of Warehouse Point, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Processes of Treating Leaf-Tobacco, of which the following is a full, clear, and exact specification.

10 This invention is an improved process of treating dried or cured leaves of plants, and will be herein described as applied to the treatment of leaf-tobacco, although it is applicable to other analogous uses.

15 The curing of leaf-tobacco is a very important part of the successful production of that commodity, the success or failure of the crop being very largely dependent upon the curing treatment. During and after the curing  
20 treatment mildew, mold, mustiness, and various other imperfections are liable to appear, arising from the treatment itself or developed by the treatment from causes latent or resident in the leaf and due to prior conditions of growth, soil, or cultivation. These  
25 imperfections are liable to impair the color, flavor, and texture of the leaf and correspondingly reduce its market value.

Various chemical agencies are employed  
30 during the curing treatment for avoiding, removing, or modifying these imperfections and for improving the taste, color, texture, and other properties and qualities of the leaf.

My present invention is a new and useful  
35 process of applying these chemical agencies to the leaf.

In the ordinary operations of curing tobacco the leaves are bunched together, and these bunches are packed end to end, with  
40 the tips of the leaves meeting or slightly overlapping, and are then compressed into a case, the butts of the leaves being at the two opposite sides of the stack or pile adjacent to the sides of the case, in which condition the  
45 tobacco is left for an extended period until it has gone through the well-known "sweating" operation, and as this customary procedure and condition are suitable for the present process I will herein describe it as  
50 being applied to the leaves while packed in this condition.

In carrying out this process in connection with the above-described ordinary procedure I preferably employ it after the tobacco has

gone through or approximately through the sweating process. The cover of the case is removed, the case is inverted and is lifted away from the stack of tobacco, leaving it in its closely-compressed condition on the floor or on a suitable table. Then the decoction,  
55 infusion, or chemical agent or compound is applied at the outer sides of the pile to the exposed butts or broken ends of the leaves and their stems. These chemical agencies are applied thereto by a brush or by spraying  
60 or in any other available way best suited to the character of the agency employed.

An agent which I have found to be particularly beneficial for the purpose of preventing and removing the mold or mildew which is  
65 liable to occur or appear during or after the sweating process is an infusion of wild cherry, which by this process permeates the entire leaf structure and overcomes or counteracts the tendency to mold or mildew, besides removing from the leaves the effect of the mildew or mold which may already have appeared  
70 therein.

There are doubtless other agents which can be employed to advantage to accomplish  
75 this or other desired results in connection with the curing of tobacco and analogous leaves. The character, strength, and proportions of the agent employed may be varied or adapted to suit differences in the original condition of the leaf, the particular deficiency or  
80 imperfection of the leaf, or the particular results desired.

In United States Patent No. 655,791, of August 14, 1900, is described a method of  
85 treatment by gasoline or similar light petroleum product followed by treatment with an infusion of wild-cherry bark. The said patent is here cited as an instance in the prior art setting forth chemical agencies, either or  
90 both of which may be advantageously employed by my present process.

It is believed that the impregnation of the leaf structure by the agency applied at the butt or broken ends of the leaves while the  
95 leaves are in close contact, resulting from compressing them into the case, is due to capillary attraction acting between the leaves. As thus performed in connection with the ordinary operations of curing tobacco the  
100 compression or compacting resulting from the ordinary methods of packing the tobacco is utilized in connection with this process.



It will be obvious that this process may be employed otherwise than in connection with the ordinary curing operations, the desired degree of compression being obtained in any convenient or available way.

The infusion of wild cherry hereinbefore referred to as being a useful chemical agent for employment with my improved process may be made according to established formulas well known to chemists and pharmacists. A convenient and simple way is to soak or steep the bark of wild-cherry trees in water, preferably with the application of heat, thereby extracting from the bark the properties thereof which are useful for the above-described process. To this aqueous solution or infusion should generally be added a suitable amount of alcohol to preserve the infusion. The alcohol also appears to serve as a vehicle for conveying the cherry solution into and through the leaf fabric. The proper strength and proportions must usually be determined by experience and with due regard to the condition of the tobacco to be treated, taking into account the variety of leaf, the soil in which it was raised, the fertilizer employed, and the weather conditions during the time of growth and during the time of curing.

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

1. The process of treating tobacco and analogous substances with a chemical agent, which consists in applying the chemical agent at the butt or broken ends of the leaves while the latter are closely compacted together.

2. The process of treating leaf-tobacco and analogous substances, which consists in compressing the leaf and applying the desired chemical agency at the butt or broken end of the leaf.

3. The process of treating leaf-tobacco and analogous substances, which consists in compressing the leaves laterally and applying an infusion of wild cherry to the butts or broken ends of the leaves.

4. The process of treating leaf-tobacco in bulk, which consists in spraying the butt-ends of the compacted leaves with an infusion of wild-cherry bark.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERBERT KNOX.

Witnesses:

WILLIAM H. HONISS,  
JAS. W. GREEN.