

UNITED STATES PATENT OFFICE.

DEMETRIUS A. GALLAGHER, OF YORK, PENNSYLVANIA.

PROCESS OF TREATING TOBACCO.

1,062,093.

Specification of Letters Patent.

Patented May 20, 1913.

No Drawing.

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To all whom it may concern:

Be it known that I, DEMETRIUS A. GALLAGHER, a citizen of the United States, and resident of York, county of York, and State of Pennsylvania, have invented certain new and useful Improvements in Processes of Treating Tobacco, of which the following is a specification.

This invention relates to a process of treating tobacco leaf for the purpose of removing impurities, improving its burning qualities, and imparting to it an improved fragrance and flavor.

It frequently happens that a crop of tobacco grown under favorable conditions as to soil and cultivation is found to be defective in burning qualities and to be ill-flavored and unsuitable for commercial purposes. Owing to the porous and absorbent nature of the tobacco leaf and the fact that it seeks its nourishment largely from the atmosphere these impurities become embedded in the leaf of the tobacco.

I have discovered that the tobacco leaf is composed of more than the upper and lower leaf surfaces, that it has a gradient interior, cellular and fibrous construction, and that the opening and expansion of the gradient interior of the tobacco leaf is necessary in order to thoroughly clean, treat or condition it.

I have also discovered or invented a process of treating tobacco by means of which impurities may be removed and the natural flavor of the tobacco restored and by means of which its burning qualities are greatly improved.

By my process tobacco which is unfit for the market can be made into good commercial leaf and tobacco which is of low grade may be greatly improved.

My process depends for its success upon the through opening of the pores or cells of the tobacco, and the separation from the tobacco, while in this condition, of foreign substances and thereafter the immediate sealing of the cells.

In carrying out my process I first take the tobacco in the "hands" as it comes from the packer or stemmed or "scrap," as the case may be, and hydrate it in water, (preferably distilled water) at a temperature of from 105° to 110° F. To the water I may add ingredients to impart flavor to the tobacco, or for any other special purpose, but in ordinary cases pure water may be used

alone. When the tobacco is thoroughly saturated it is removed and placed on screens or racks, the "hands" standing on their butt ends, and being covered with burlap or similar fabric. The screens or racks should be in a closed building or compartment and the tobacco should be left in this condition until all dripping ceases, the temperature of the compartment being in the meantime quickly raised to about 115° F. In case of the treatment of stemmed and "scrap" tobaccos racks or screens adapted to the handling of loose tobacco are used. I then uncover the tobacco and place it in a hot room and raise the temperature of the compartment quickly to from 125° to 150° F. by means of dry steam heat. The moisture in the tobacco being insufficient to keep it thoroughly moist throughout the heating process, I generate additional moisture by evaporating hydrating liquid. The maximum heat should be attained in from twenty to thirty minutes and should be maintained until the tobacco has become thoroughly heated through and is limp in every part, and its cells, both inner and outer, have opened. The degree of heat required and the length of time in attaining the same should be varied within the limits mentioned, depending upon the character of the tobacco being processed. This step in the process thoroughly opens the cells of the tobacco and dislodges foreign substances affecting its flavor and burning qualities, and at this stage in the process, any ingredients which may have been added to the hydrating liquid to impart flavor, will become fixed in the tobacco by coalescence. I then remove the tobacco quickly from the hot room or chamber to a room or place which is as cool, at least, as the normal outdoor temperature. The tobacco is here subjected to a draft or blast of cool air and well shaken to free the leaf from soil substances and all other impurities dislodged by the heating and steaming steps in the process. The sudden cooling quickly closes the pores or cells of the leaf and seals them, retaining the desired flavor and constituents of the leaf. The tobacco may now be stemmed and dried in the usual way.

It will be evident that my improved process may be carried out by hand or that its various steps may be performed by automatic or semi-automatic machinery.

The process is independent of any particular apparatus.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. The process of treating tobacco to free
5 it of impurities and improve its flavor and
burning qualities which consists in subject-
ing the tobacco to a solution having hot
water as a base, at a temperature of 105°
to 110° F., then placing the tobacco upon
10 screens or racks and gradually raising the
temperature of the surrounding air to ap-
proximately 115° F., and maintaining this
temperature until all dripping ceases, then
quickly raising the temperature to 135° to
15 160° F. and sustaining this temperature
until the tobacco is thoroughly hot and limp
and its cells open, then shaking the tobacco
to free it from impurities, and finally seal-
ing the cells by suddenly cooling it.
2. The process of treating tobacco to free

it of impurities and improve its flavor and
burning qualities which consists in sub-
jecting the tobacco to a solution having hot
water as a base, at a temperature of 105° to
110° F., then placing the tobacco upon 25
screens or racks and gradually raising the
temperature of the surrounding air to ap-
proximately 115° F., and maintaining this
temperature until all dripping ceases, then
quickly raising the temperature to 135° to 30
160° F. and sustaining this temperature
until the tobacco is thoroughly hot and
limp and its cells open, and finally sealing
the cells by suddenly cooling it.

In testimony whereof I affix my signature 35
in presence of two witnesses.

DEMETRIUS A. GALLAGHER.

Witnesses:

EDNA M. LICHTENBERGER,
ELLEN M. WELLENSIEK.