

# UNITED STATES PATENT OFFICE.

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PROCESS FOR TREATING TOBACCO, &c.

940,181.

Specification of Letters Patent.

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No Drawing.

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*To all whom it may concern:*

Be it known that I, GEORG MONTAG, inventor, citizen of the Grand Duchy of Baden, in Germany, residing at 28 Riedfeldstrasse, Mannheim, in the Grand Duchy of Baden, Germany, have invented certain new and useful Improvements in Processes for Treating Tobacco or to Convert other Foliages into Tobacco-Like Leaves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Experiments have been made to improve common tobacco plants by treating them with a lixivium obtained from better kinds of tobacco. Such experiments, however, have not led to any practical result because the materials were not used in their natural condition as regards their composition, but chemicals or hot water were used for the lixiviation. As a consequence, many aromatic constituents of the tobacco were driven off, so that an artificial product was obtained whose taste and smell was quite different from those of natural tobacco.

The present invention relates to a process for treating tobacco or to convert other foliage into tobacco-like leaves, in which process the tobacco material used retains its natural components.

In its general form the process consists in pressing out the juice, hereinafter called the lixivium, from green tobacco leaves in a cold condition, which is then treated in warm condition together with less valuable kinds of tobacco plants in green condition, whose juice is displaced by the lixivium so that a better kind of tobacco is obtained, containing all the natural constituents. It is of advantage to first allow the lixivium to ferment, which, on afterward being heated, will also cause the green tobacco of less value soaked therein to ferment, but still the fermentation of the lixivium need not take place beforehand, but can also begin simultaneously with the heating. The treatment of the green leaves with the lixivium is carried out at a moderate temperature and occupies little time, a few hours, at the most. In this way the home tobacco plant can be

improved by the lixivium obtained from foreign tobacco. The process has, further, the advantage that it is not necessary to wait until the home tobacco is perfectly ripe, so that time can be saved, and, indeed, several harvests of home tobacco are possible. For example, the unripe tobacco, such as suckers (that is the side shoots of the tobacco plant) can be soaked in the lixivium and a quick fermentation will then be obtained, which is quite independent of the weather. This is of particular importance in such countries, in which the sun has not sufficient power to finish the fermentation. In this way, the unripe tobacco leaves can be artificially ripened and time saved. In consequence of the perfect fermentation with the lixivium at a moderate degree of heat, the common kinds of tobacco, such as are found in Germany, are rendered weaker and milder, even when the fermentation of the green tobacco leaves is effected by a lixivium obtained from green leaves of the same kind of tobacco.

The present invention also comprises the conversion of the leaves of other plants, such as those of the rose and chestnut trees, of beet-root, turnips and sorrel, into tobacco-like materials, the process being carried out in the same way, that is, by pressing the lixivium out of green tobacco leaves, and by then soaking the leaves of such plants in the lixivium in a warm condition.

The process is of special value for the industry, because it enables the heretofore valueless parts of the tobacco plant to be utilized, which were thrown away or used as manure. In addition to the side shoots of the tobacco plant, the stalks etc. can be used.

By way of example the process may be carried out as follows: Green tobacco leaves, side shoots and stalks etc. are cut down in a green condition, and then brought into a press, for example, into a screw or fruit press. The lixivium is pressed out at a considerable pressure in a cold condition and a gray juice is obtained, which amounts to about 50% of the weight of the pressed material, the remaining 50% being the dried plant. It is of importance that the leaves are pressed while in a green unfermented

condition. This gray lixivium can be used at once to treat the plants to be improved, in which case its fermentation can be brought about simultaneously with that of the leaves. It is, however, of advantage to allow said juice to ferment in closed vessels, before treating the leaves, in which case a thick sediment is deposited, leaving a bright liquid over the same, which is drawn off into an open or closed vessel. In preparing the lixivium no heat is employed and this feature is important.

If it is desired to improve the quality of bad tobacco, the lixivium of the side shoots, stems, or of the green leaves of a better kind of tobacco is used. The less valuable kind of tobacco is placed in an earthenware oven in a green condition, whereupon the lixivium is poured over the same, so that the tobacco is well covered. The mixture is then heated to about 35—36° C. boiling being avoided. The less valuable tobacco juices are then partly or entirely displaced and replaced by the good lixivium. The green leaves are then wet and yellow and their fermentation completed. When dry such leaves can be used at once for making cigars etc. If the lixivium of green tobacco leaves is used to improve green tobacco leaves of the same kind an artificial ripening or fermentation takes place, which is independent of the weather and effects a considerable saving. Before drying the leaves thus treated, the superfluous lixivium which is then of less value is pressed off from the leaves and can be used again. Not only proper tobacco leaves but also less valuable green tobacco leaves can be treated with the lixivium of better kinds of tobacco. For example, the lixivium obtained out of the side shoots of the better kinds of foreign tobacco can be imported and the side shoots of the less valuable kind of home tobacco may be treated with such lixivium in the manner described.

The used lixivium, or also that obtained direct from the side shoots of the tobacco plant, according to the process above described, can also be employed to convert other kinds of leaves, such as those of the rose and chestnut trees or of turnips, beet-root and sorrel, which, when so treated, can also be used for making cigars etc. Beet-root contains sugar and has a sweet taste in smoking, while sorrel is sour and is therefore an imitation of the Havana cigar. The process for example is as follows: The dry suckers or side shoots of the tobacco plant are placed, together with the green dried leaves of the other plant, in layers over each other, and the lixivium, for example, that already used, as above explained, is poured thereover. The mixture is then heated in an oven until the lixivium has replaced more or less the juice of said leaves. The wet leaves are then

scraped or pressed off and dried and have the appearance of tobacco. To the original lixivium sugar can be added in hot condition, when the tobacco to be used is placed in the oven.

Experiments have shown that a mixture of leaves treated as above is very suitable for making cigars.

In the finished product the constituent parts have been altered by the action of the lixivium, so that they are equal in value to tobacco leaves. Even the suckers or side shoots, which were formerly thrown away, because they never became ripe, have now the same value as the good ripened tobacco leaves.

What I claim and desire to secure by Letters Patent of the United States is:—

1. The hereindescribed process of manufacturing tobacco, which consists in extracting the juice from green unfermented tobacco in a cold state by means of pressure, saturating leaves to be treated with said juice and then heating the saturated leaves.

2. The hereindescribed process of manufacturing tobacco, which consists in extracting the juice from green unfermented tobacco in a cold state by means of pressure, saturating leaves to be treated with said juice, and then heating the saturated leaves to about 35 degrees C.

3. The hereindescribed process of manufacturing tobacco, which consists in extracting the juice from green unfermented tobacco in a cold state by means of pressure, allowing the extracted juice to ferment, saturating the leaves to be treated with the fermented juice and then heating the saturated leaves.

4. The hereindescribed process of manufacturing tobacco, which consists in extracting the juice from green unfermented tobacco in a cold state by means of pressure, allowing the extracted juice to ferment, saturating the leaves to be treated with the fermented juice and then heating the saturated leaves to about 35 degrees C.

5. The hereindescribed process of manufacturing tobacco, which consists in extracting the juice from green unfermented tobacco in a cold state by means of pressure, allowing the extracted juice to ferment in a closed vessel, separating the juice from the sediment formed during fermentation, saturating the leaves to be treated while in a green condition with the separated juice and heating the saturated leaves to about 35 degrees C. in an earthenware oven.

6. The hereindescribed process of manufacturing tobacco, which consists in extracting the juice from green unfermented tobacco in a cold state by means of pressure, allowing the extracted juice to ferment in a closed vessel, separating the juice from the

sediment formed during fermentation, saturating the leaves to be treated while in a green condition with the separated juice, recovering the juice from the saturated  
5 leaves by means of pressure and heating the pressed and saturated leaves to about 35 degrees C.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

GEORG MONTAG.

Witnesses:

THEODOR OELENHEINZ,  
FRIEDRICH FÜTTERER.