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UNITED STATES PATENT OFFICE.

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TREATING TOBACCO.

SPECIFICATION forming part of Letters Patent No. 771,355, dated October 4, 1904.

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To all whom it may concern:

Be it known that I, JOHN L. DANIELS, JR., a citizen of the United States, a practicing physician, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Treating Tobacco, of which the following is a specification.

The object of my present invention is to prevent as far as practicable the injurious effects produced on the human system by the smoking of tobacco; and to this end I subject the tobacco to the action of a soluble oxidizing agent, whereby I convert all or a portion of the nicotin present in the leaves into nicotinic acid and at the same time improve its smoking qualities by exerting a strong oxidizing action on the resinous substances present in the tobacco. The leaves are not changed in color by the process, nor does the tobacco suffer any defect which could render it unfit for use as a commercial article, and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to practice the same.

I am aware that various methods have been proposed to render the nicotin in tobacco harmless to the user and that it has also been attempted to secure this desired result by oxidizing the nicotin. My invention, however, differs from the prior methods, as will appear more fully hereinafter.

In experimenting to find a suitable soluble oxidizer for the nicotin I have found that it is an extremely stable compound, not easily oxidized, resisting all but the most powerful oxidizing agents. Common oxygen, periodic and perchloric acids produce no oxidizing action on nicotin or its salts.

The following process has in view the conversion of the nicotin contained in the tobacco either wholly or partially into nicotinic acid by means of a soluble oxidizing agent which will leave no injurious reaction behind.

In working along these lines I have found ammonium permanganate will readily effect the oxidation of the nicotin without leaving any injurious reaction products in the leaves. Any other permanganate will effect the oxidation equally well; but the reaction products are somewhat injurious and also difficult to free from tobacco. The reaction products when ammonium permanganate is used are manganese sesquioxid and ammonia. The ammonia is readily volatilized in the subsequent drying, and the sesquioxid being an insoluble compound of manganese can have no injurious action on the smoker. The solution of ammonium permanganate does not oxidize the ethereal oils, nor has it any appreciable effect on the inorganic salts present in the tobacco. The treatment is entirely harmless and serves to improve the tobacco in various ways, such as by oxidizing the resinous substances in the tobacco, as before stated. In carrying out my process as set forth above the tobacco, either loosely or in bundles, is immersed in a ten-per-cent. solution of the ammonium permanganate until the desired amount of oxidation has taken place. The leaves are then taken out, washed, and allowed to dry.

Having now fully described my invention, what I claim is—

1. The herein-described method of treating tobacco to oxidize the nicotin contained therein, which consists in exposing the leaves to the action of oxygen given off by permanganate of ammonium.

2. The herein-described method of treating tobacco to oxidize the nicotin contained therein, which consists in immersing the leaves in a solution of ammonium permanganate.

JOHN L. DANIELS, JUNIOR.

Witnesses:
GEORGE L. DANIELS,
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