UNITED STATES PATENT OFFICE.

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FLUID FOR TREATING TOBACCO-LEAVES OR LEAVES OF LIKE PLANTS.

1,334,752. Specification of Letters Patent. Patented Mar. 23, 1920.

No Drawing. Application filed March 18, 1919. Serial No. 283,378.

To all whom it may concern:

Be it known that I, SHIGEKICHI HAGINO, subject of Japan, residing at No. 4 Otsuka Kami Machi, Koishikawa Ku, Tokyo, Japan, have invented new and useful Improvements in Fluids for Treating Tobacco-Leaves or Leaves of like Plants, of which the following is a specification.

This invention relates to a fluid for treating tobacco, consisting of a mixture of a fluid obtained by boiling resin in a solution of table salt, a fluid obtained by boiling the bark of the *Pinus Massoniana* in a solution of bicarbonate of soda, and a solution of an organic salt of iron. The object of this invention is to improve the flavor and color of inferior tobacco which gives out offensive smell when smoked, to give thereto antiseptic and mold proof property, to soften its biting taste, and to minimize nicotin given out by tobacco.

The following is an example of carrying my invention into practice.

Fluid No. 1.—When rosin is boiled in 10% solution of table salt, it will become a black mass, and a liquid of thin milky consistency with grayish color will be obtained. Take out the black mass, filter the remaining liquid, and the Fluid No. 1 will be obtained.

Fluid No. 2.—Boil the bark of the *Pinus Massoniana* for a suitable period in a solution of bicarbonate of soda, and the decoction which is transparent and of grape color, strained therefrom, is the Fluid No. 2.

Fluid No. 3.—Put an iron oxid in water mixed with vinegar, and leave the mixture for a suitable time, stirring it now and then. The clear fluid obtained by filtering the mixture is the Fluid No. 3.

Mix the above three kinds of fluids, and stir the mixture well, and a fluid for treating tobacco of my invention is obtained.

To treat tobacco of inferior quality, the leaves are caused to imbibe my fluid well by sprinkling it on them by sprays. To treat the mid ribs of tobacco leaves, they are steeped for a suitable time in my fluid. They are then taken out of the fluid, well beaten, sometimes sprinkling on them a small quantity of powder of the black mass obtained when preparing the Fluid No. 1, and then cut as tobacco is generally cut.

The fluid of my invention may also be used to treat leaves and barks of plants other than tobacco, and to obtain therefrom a substitute for tobacco by steeping such leaves or barks well pressed in my fluid, and by cutting them after drying into fine chops by any suitable means, or the leaves or barks so treated may be pressed into thin sheets like paper. These thin sheets may be marked with veins so as they appear like natural tobacco leaves, and cut into a proper size, and if such small pieces be gummed on one edge, smokers may roll them into cigars when they smoke. Or such sheets may be cut into fine chops, and used as material for manufacturing cigarettes.

This invention has been completed from experiments, and as yet it is impossible to explain it by scientific theories. But it seems part of sesqui-terpene and other terpenes contained in the resin and bark of trees combining with iron form a compound something like soap which gives to the leaves and barks treated with the fluid brownish color, odor and stimulating property of natural tobacco, improves flavor, and softens the biting taste. They are also made less liable to be attacked by mold or any other fungi, and when burned for smoking, nicotin and ammonia compounds are decomposed and expelled.

I claim:

1. A fluid for treating tobacco leaves or leaves of like plants consisting of a fluid obtained by boiling resin in a solution of table salt, a fluid obtained by boiling bark of the *Pinus Massoniana*, and a solution of an organic salt of iron, substantially as herein described.

2. Tobacco having incorporated therein a mixture of a fluid obtained by boiling resin in a solution of table salt, a fluid obtained by boiling bark of the *Pinus Massoniana*, and a solution of an organic salt of iron, substantially as herein described.

In testimony whereof I have signed my name to this specification.

SHIGEKICHI HAGINO. [L. S.]