Patented Feb. 27, 1934

1,949,012

UNITED STATES PATENT OFFICE

1,949,012

METHOD OF PREPARING TOBACCO FREE FROM NICOTINE

Leonhard Frank, Berlin-Wilmersdorf, Germany, assignor to Generaldirektion der Österreichischen Tabak-Regie, Vienna, Austria, an Austrian Government undertaking

No Drawing. Application March 24, 1932, Serial No. 601,052. In Germany March 27, 1931

2 Claims. (Cl. 131—6)

The usual extraction processes for removing nicotine from tobacco consist therein that the tobacco is extracted by means of volatile organic solvent with or without employment of an alkali. After the separation of the nicotine the extracts are then added again to the denicotined tobacco. Through the removal of the nicotine from the solvent, generally carried out by treatment with an acid aqueous liquid, important aromatic substances are lost, the lack of which after the reincorporation of the extracts to the denicotined tobacco is responsible for the fact that the finished product has not a full, balanced and aromatic taste and smell. Indispensable aromatic ingredients are missing. An often repeated shaking out of the acid washing liquid with the organic solvent is entirely useless, the aromatic substances cannot be extracted in this way.

It has now been found that these aromatic substances can be entirely regained from the washing liquid if the aqueous liquid employed in the removal of the nicotine from the extracts is afterwards distilled with water and the aromatic substances extracted from the distillate with the organic solvent originally employed. These extracts are reincorporated with the other nicotine free extracts. The entire aromatic substances are in this way recombined. They are incorporated with the tobacco in a known manner and give it again its full aroma.

The following is a detailed example:—A suitable amount of tobacco in leaf form or cut up, is preferably moistened with some aqueous or alcoholic ammonia solution and then extracted in a Soxhlet extraction apparatus with readily volatile petroleum ether free from high-boiling hydrocarbons, until the discharging extraction agent when shaken with dilute hydrochloric acid, no longer shows any alkaloid reaction with silicotungstic acid. The collected extraction agent, which contains nicotine, aromatic substances and other extractives, is thereupon shaken twice in the separating funnel with dilute mineral acid. The combined acid, aqueous washing liquor, which contains the nicotine as a salt as well as a part of the aromatic substances in solution, is subjected to steam distillation as long as the distillate passing over still has noticeable smell. The nicotine remains behind, fixed as salt, in the distillation flask, and the aromatic substances contained in the aqueous solution pass over with the steam alone. The distillate is then preferably shaken with a further small amount of petroleum ether, the aromatic substances contained in the distillate being taken up by the petrol ether. This petrol ether extract is now combined with the petrol ether solution, freed from nicotine and used for the extraction of the tobacco. The aromatic and extractive substances contained in the extract are then incorporated again with the tobacco by applying the solution and evaporating off the solvent. The amount of aromatic substances which can be obtained by means of steam distillation from the acid washing liquor varies with the type of tobacco treated. On an average 0.2% of the weight of tobacco used is obtained, an amount which is very considerable and of essential importance in the case of aromatic and odoriferous substances.

I claim:

1. The method of obtaining aromatic substances from tobacco comprising treating the tobacco with an organic solvent, removing the nicotine from the extracts with an acid aqueous washing liquid, distilling the washing liquid with water and shaking the distillate with the original extraction solvent.

2. The method of preparing tobacco free from nicotine comprising treating the tobacco with an organic solvent for nicotine until the nicotine is substantially extracted, removing the nicotine from the extract with an acid aqueous washing liquid, steam distilling the washing liquid, shaking the distillate with the original extraction solvent, and combining any aromatic substances thus obtained and the other nicotine free extracts with the treated tobacco.

LEONHARD FRANK.