

# UNITED STATES PATENT OFFICE.

HERMANN APEL, OF KONSTANZ, GERMANY.

## MANUFACTURE OF TOBACCO-LIKE PAPER.

No. 799,215.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed December 19, 1903. Serial No. 185,890.

*To all whom it may concern:*

Be it known that I, HERMANN APEL, a subject of the Grand Duke of Baden, residing at Konstanz, Baden, Empire of Germany, have invented a certain new and useful Improved Manufacture of Tobacco-Like Paper, of which the following is a specification.

This invention relates to a process for manufacturing a paper which when burned gives very nearly the same aroma and taste as a tobacco leaf or wrapper. For this purpose the paper is specially prepared by a special process forming the object of this invention.

The process consists in raw paper being impregnated with a tobacco decoction, which is allowed to ferment in the paper. If fresh unfermented tobacco decoction is used, the paper impregnated with it must be kept in a wet state for a time in order that the fermenting process may take place. If, however, a decoction that has already started to ferment is used, the time during which the paper is required to stand will be considerably reduced. The raw paper can be either thin paper or tissue made from ordinary paper-paste, or it may be a paper prepared in the well-known manner from parts of the tobacco-plant, such as the veins and waste.

In order to make the process clearly understood, an example will be described explaining the different stages of the process. The raw paper utilized in this example is supposed to be prepared from parts of the tobacco-plant.

In order to produce the paper, tobacco leaf, veins, or fibers are cleaned and broken up and then placed in a water solution of hydrate of lime mixed with ten per cent. hydrochloric acid. The material is left in the solution for about four to eight days until it becomes perfectly soft and with fine fibers. The material then is washed, ground, and made into paper, ten to forty per cent. of pulp (rags or cellulose) being added. The paper should weigh from sixteen to twenty grams per square meter. The paper as received from the paper-making machine is thoroughly wetted with tobacco decoction by means of a suitable device, the composition of the decoction being described below. The tobacco decoction is obtained by boiling ground tobacco in water, so as to extract from it all aroma and its principal ingredients. The whole is then well pressed out. In order to obtain a good aroma and taste when burning, tobacco-powder of a good kind and spices such as are generally used

in treating tobacco can be added to the tobacco decoction obtained. For instance, to about one hundred liters of decoction one liter of Jamaica rum, 2.5 kilograms of alcoholized cascarrilla rind, five kilograms of alcoholized tobacco, and eight grams of coumarin dissolved in 96° alcohol can be added. The paper impregnated with the decoction obtained in the above manner is arranged in several layers or rolled up and stored in an air-tight fermenting-chamber kept at a temperature of about 37° centigrade. During the time it is left to stand the decoction contained in the paper begins to ferment in the same way as tobacco. According to the temperature at which the paper is kept the fermentation takes place earlier or later, said fermentation manifesting itself by the increase of temperature and swelling of the paper arranged in layers and by the sweating of the inner walls of the fermenting-chamber. Thus, for instance, after the paper has been left for a few weeks the temperature rises from 15° or 20° centigrade to 24° centigrade in the case of a decoction obtained by boiling one hundred and fifty grams of fairly finely pulverized tobacco for two hours in six hundred cubic centimeters of water having been used, one hundred and fifty grams of very fine tobacco-powder having been added to the warm decoction. If desired, the tobacco decoction may be in a state of fermentation or be fermenting at the time the paper is impregnated, in which event the time during which the paper is required to stand will be considerably reduced. The paper, which has become rough owing to the treatment with tobacco decoction, is smoothed and only requires to be cut to the size required in order to be ready for use.

Owing to the action of the fermentation of the tobacco decoction on the paper which is impregnated with it, the paper when burning is very similar to tobacco as regards the taste and aroma.

The paper obtained in the manner described can be used as cigarette-paper and also to replace the outer layer of tobacco on the cigars or for packing tobacco, cigarettes, or cigars.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In the manufacture of a tobacco-like paper, making a thin paper from paper-pulp or from finely-ground parts of the tobacco-plant, impregnating the paper with a tobacco decoction, subjecting the impregnated paper

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to a fermenting process, at a fermenting temperature, and finally smoothing the paper, substantially as described.

2. In the manufacture of a tobacco-like paper, making a thin paper from paper-pulp or from finely-ground parts of the tobacco-plant, impregnating the paper with a fermenting tobacco decoction, and finally smoothing the paper, substantially as described.

10 3. A tobacco-like paper prepared by treat-

ing paper with a tobacco decoction, and then subjecting the impregnated paper to a fermenting process, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two sub- 15 scribing witnesses.

HERMANN APEL.

Witnesses:

WICK WILHELM,  
ALPEA WICK.