IN THE UNITED STATES PATENT OFFICE
Group 331

Applicant : William Henry Danker

Serial No. : 396,414

Filed : September 14, 1964

For : TOBACCO COMPOSITION

New York, New York 10017
December 11, 1967

Hon. Commissioner of Patents
Washington, D. C. 20231

Amend B

AMENDMENT

Sir:

In response to the Office Action of September 13, 1967 kindly amend the above-identified application as follows:

In the claims:

Cancel claims 6, 7, 8, 12, 13 and 14 and add the following claim in place thereof:

--15. A tobacco composition which produces, upon being smoked, a smoke having a pH of from about 4.5 to about 6, said composition comprising reconstituted smoking tobacco and from about 0.1 to about 5 percent by weight, based on the weight of said tobacco, of a member selected from the group consisting of sodium bisulfite, potassium bisulfite, lithium bisulfite, sodium carbonate, potassium carbonate and lithium carbonate, said reconstituted smoking tobacco comprising substantially tobacco stems and fines.

Remarks

In accordance with the present invention, the addition of certain alkali metal carbonates and bisulfites to tobacco and particularly to reconstituted tobacco, such as fines and stems, has been found to improve the qualities of the tobacco. Such salts, as employed in accordance with the present invention, result in a milder and less harsh main stream smoke of reconstituted tobacco and in more desirable smoke odors and flavors.

Generic claims 12, 13 and 14 have been replaced by claim 15 which is directed to the Markush Group containing both alkali metal carbonates and alkali metal bisulfites.

None of the art cited, no matter how combined, discloses or suggests the use of alkali metal bisulfite or carbonates as a desirable component of a reconstituted smoking tobacco composition.

None of the cited art relates to a smoking tobacco composition whose tobacco component is reconstituted tobacco.

Reconsideration is respectfully requested of the rejection of certain claims as "unpatentable over Tyrer." Tyrer treats "normally discardable and poor quality portions of tobacco leaves" not reconstituted tobacco comprising substantially tobacco stems and/or fines. The tobacco leaves of Tyrer are discardable because of the alkalinity of its smoke due to the presence therein of ammonia, nicotine and other nitrogen bases.

Reconsideration is respectfully requested of the rejection of certain claims "as unpatentable over Toulmin." The Toulmin reference discloses the addition of 2-8% by weight of a tobacco mixture of alkali metal bicarbonates as a temperature reducing and controlling substance. The present invention envisions using lesser quantities of alkali metal carbonates and bisulfites of a magnitude of 10 than disclosed by Toulmin. It would appear that the position taken in the Office Action is in error in the statement that sodium bicarbonate is the full equivalent of sodium carbonate. There are some significant differences in the composition as well as their properties. In addition to the hydrogen atom present in the bicarbonate, its anion is the extremely weak acid HCO_3^-, whereas the carbonate ion (CO_3^{--}) is a strong base so that solutions of sodium carbonate give a definite alkaline reaction. Toulmin clearly does not suggest the use of alkali metal bisulfites.

Reconsideration is also respectfully requested of the rejection of certain claims "as unpatentable over De Susini or Avedikian." De Susini discloses the addition of vegetable tar to tobacco and discloses applying soda (which may be either sodium carbonate or sodium bicarbonate) to the wrappers and packages and not directly to the tobacco.

Avedikian discloses the bleaching of moistened tobacco by exposing same to oxides of nitrogen and the neutralizing of the acids present in the bleached tobacco with an alkaline liquid such as solutions of sodium or potassium carbonate or bicarbonate. There is no basis for the statement in

the Office Action that:

> "In Avedikian, obviously, the sodium carbonate will be applied in excess so that the desired neutralization is definitely accomplished. The specific recited amounts, it is believed, will obtain in the finished compositions of the reference. Since the additive is the same as that called for, it is believed that the selfsame advantage ascribed to applicants composition will inherently and necessarily obtain in the compositions of the patentees."

No amounts are recited in Avedikian, and since the neutralizing step follows a washing step presumably little acid remains and thus little carbonate is required for neutralizing. The patentee does not teach the addition of alkali metal carbonates or bisulfites to smoking tobacco as an integral part thereof nor is this result intended by him. There is no basis for supposing that the alkali metal carbonates will remain in contact with the tobacco after the evaporative step that follows neutralization nor assuming arguendo that some is retained that the requisite amounts to achieve applicant's results would constitute part of the tobacco composition. In fact, additional treatment with salts (alkali metal salts of nitric acid or of mono- or poly-basic organic acids having 1 to 5 carbon atoms) is needed to improve burning properties.

Tyrer discloses the use of catalysts, such as salts of cobalt, magnesium, nickel, copper, chromium and silver to promote greater combustion of nitrogen bases thus reducing the alkalinity of the smoke and further that, in connection with these metals, carbonates are useful. The patentee also discloses that secondary catalysts, including salts of potas-

sium and sodium, may be useful but he does not suggest in connection with these secondary catalysts that the potassium and sodium salts are carbonates. Furthermore, patentee does not teach that the catalytic salts become an integral part of the smoking tobacco composition.

Reconsideration is also requested of the rejection of certain claims as "unpatentable over Rickard and Feldhansen." Rickard and Feldhansen disclose the treatment of tobacco with potash which includes potassium carbonate in trace amount (as impurities). Thus it cannot be argued that sufficient carbonate is present to provide the results obtained by applicant. Rickard uses 16-32 ounces of potash per gallon of water in which the amount of potassium carbonate is negligible or nil. Feldhansen uses a dilute solution of potash. Furthermore, applicant's composition includes reconstituted tobacco, such as fines and stems, whereas patentees treat tobacco leaves.

Finally, Baier discloses the use of potassium or sodium bisulfite to destroy the residual hydrogen peroxide following the peroxide bleaching of tobacco but not as an integral component of a reconstituted smoking tobacco composition.

None of the art discloses alkali metal bisulfite in combination with smoking tobacco, and in view of the above comments regarding alkali metal carbonates, reconsideration of the rejection of this application and allowance of claims

3, 4, 5, 9, 10, 11 and 15 are respectfully requested.

Respectfully submitted,

WATSON LEAVENWORTH & KELTON

By_____
Howard K. Kothe