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AMENDED SPECIFICATION

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(54) TOBACCO EXPANSION PROCESS

(71) We, R. J. REYNOLDS TOBACCO COMPANY, a Corporation organised and existing under the Laws of the State of New Jersey, United States of America, of 403 North Main, Winston-Salem, North Carolina 27102, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a method of treating tobacco to increase the filling capacity thereof.

Tobacco leaves when harvested normally contain a considerable quantity of water and during the normal tobacco curing process this water is removed by drying resulting in shrinkage of the leaf structure. In conventional processes of preparing tobacco for storage and subsequent cigar or cigarette manufacture, the tobacco regains very little, if any, of the shrinkage resulting from the drying step so that a significant loss in the filling capacity of the tobacco is the result. Thus, the cured tobacco has a bulk density which is generally in excess of that required for making satisfactory cigarettes or cigars. Also, during cutting of leaf or strips for making cut filler for cigarettes, the shreds are frequently laminated together to form hard, dense particles which occupy far less volume than the original shreds occupied. This is economically wasteful since these hard compacted shreds are not necessary in a smoking product to produce a satisfactory article.

Various methods have been prepared for increasing the normal filling capacity of dry or cured tobacco, these procedures involving, for example, operations in which the tobacco is subjected to high pressure steam, followed by sudden release of pressure. Also it has been suggested that the filling capacity of tobacco may be increased (i.e., its bulk density reduced) by exposing the tobacco particles or fibres to the vapors of an organic liquid or to an organic liquid followed by air drying at ordinary pressures. However, these prior methods have, in general, not been wholly satisfactory either because they are not effective for expanding the filling capacity to any great extent or because they result in shattering of the tobacco structure and particles so that considerable waste incident to the formation of fines results.

It is an object of the present invention to provide a new and convenient method of treating tobacco to increase the filling capacity thereof.

According to the present invention there is provided a method of treating tobacco to increase the filling capacity thereof which comprises impregnating the tobacco with a compound capable of liberating a gas when subjected to chemical decomposition, and subjecting the impregnated tobacco to conditions whereby the compound is chemically decomposed to liberate the gas within the tobacco and thereby to increase the filling capacity of the tobacco.

The above-described method according to the invention can be carried out under readily controlled conditions to produce a tobacco having the desired filling capacity. A particular advantage of the method according to the invention is that the elevated temperature required in many previous processes can, if desired, be avoided by selecting for impregnation of the tobacco a compound which does not require an elevated temperature to effect liberation of the gas.

In general any chemical compound which is capable of chemical decomposition to release a gas under conditions non-deleterious