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NL-2587 BN Den Haag(NL)(54) **Tobacco product and method of making such product.**

(57) A product made from at least one tobacco wrapper which is tightly and helically wound directly around a substantially open core extending throughout the length of the product. Such a tobacco product can be made by winding at least one tobacco wrapper tightly and helically around a mandrel, the dimensions of each tobacco wrapper and the pitch angle of the helical wrapping being selected such that a first winding is covered at least partly by at least a second and a third winding, and each tobacco wrapper being so processed that upon completion of the winding operation the tightly wrapped configuration is maintained even during and after the removal of the mandrel so as to obtain a substantially open core. If a mandrel having a substantially open cross-section is used, this mandrel can remain behind in the product as a lost core.

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The invention relates to a product made from tobacco or tobacco leaves. The invention further relates to a method of making such product.

Such tobacco products are generally known and referred to as cigars. A cigar is made from a core consisting of stripped, cut and/or folded tobacco leaves, which core is held together by tobacco wrapper leaf wound around it. In such a product, the core is the essential constituent, with the stripped, cut and/or folded tobacco leaves being held together in such a way that a great multiplicity of fine air passages extending in the longitudinal direction of the core are formed and maintained. This last is the main purpose of the tobacco wrapper which ensures that the core is held together in the desired manner and the fine air passages are closed off relative to the surroundings in radial direction of the core.

Another type of tobacco product is chewing tobacco. For making chewing tobacco, the tobacco leaves are processed and compressed to form a piece of material whose appearance can be designed in various manners. The most commonly used forms are blocks and rods.

It is an object of the invention to provide a new type of tobacco product which moreover permits consumption in different ways.

In accordance with the invention, this is achieved with a product made from at least one tobacco wrapper which is tightly and helically wound directly around a substantially open core extending throughout the length of the product. By virtue of the substantially open core which functions as a central air passage, a product so obtained can be consumed in the same manner as a thin cigar, while it is equally possible to consume the product by chewing it because of the fairly solid, tightly-wrapped cover in combination with the substantially open core which can easily be bitten or pressed shut. Naturally, it is also possible to consume the product partly by smoking and partly by chewing.

The substantially open core can be realized and designed in many ways. Because it should also be possible to smoke the product, the open core should be so dimensioned that the smoke sucked from the open core is not too hot. In view of this, it is preferable, in accordance with a further embodiment of the invention, that the core is a substantially cylindrical passage, whereby in relatively simple manner optimum conditions have been created to keep the speed and temperature of the smoke sucked through the open core within a desired range.

When in accordance with a further preferred embodiment of the invention flavourings are incorporated into the product, which can be drawn from the product along with the air sucked through the

open core, an extra dimension has been added to the consumption of the product in that this enables consumption of the product not only by chewing and smoking but also by sucking the product, which yields a particular taste in the mouth, naturally depending on the selected flavouring, which can be chosen from a wide range of known flavourings.

In accordance with a further embodiment of the invention, it is possible to further add flavourings that can be drawn from the product by chewing it. Optionally, these flavourings can be combined with flavourings that can be released from the product by sucking or smoking.

The invention further relates to a method of making a product from tobacco leaf, which method is characterized by winding at least one tobacco wrapper tightly and helically around a mandrel, the dimensions of each tobacco wrapper and the pitch angle of the helical wrapping being selected such that a first winding is at least partly covered by at least a second and a third winding and each tobacco wrapper being processed so that upon completion of the winding operation the tightly wrapped configuration is maintained even during and after the removal of the mandrel so as to obtain a substantially open core. In addition, it is equally possible to obtain the product by wrapping at least one tobacco wrapper tightly and helically about a mandrel of substantially open cross-section, the dimensions of each tobacco wrapper and the pitch angle of the helical wrapping being selected such that a first winding is covered at least partly by at least a second and a third winding and each tobacco wrapper being processed so that upon completion of the winding operation the tightly wrapped configuration is maintained, with the mandrel remaining behind in the product as a lost core. Thus a new tobacco product can be obtained, having a solid cover surrounding a substantially open core, which product can be consumed both by smoking and by chewing or a combination of the two.

As a mandrel for winding the tobacco wrapper about, preferably an elongated rod-shaped member is used, which in the case of a mandrel that is to be removed afterwards can be a wire of varying or constant circular cross-section.

If the product is to obtain a third function for consumption in addition to smoking and chewing, then, in accordance with a further embodiment of the invention, flavourings are incorporated into the product, which can be effected in different manners. For flavourings which are to be released by means of smoking or chewing, it may be preferable that flavourings are provided on or in a tobacco wrapper before it is wound and/or that flavourings are provided between the windings during winding of the tobacco wrapper. The substantially open

core, however, makes it possible to draw the flavourings from the product by sucking air through that core. In that case, it may be preferable for flavourings to be provided in the open core after winding of the tobacco wrapper. Naturally, it is equally possible to use any combination of the above described methods, depending on the manner or manners of consumption contemplated.

The provision of flavourings in the open core or in or on the surrounding parts of the solid cover can be effected by means of injection or impregnation, but can also be realized by providing flavourings on the mandrel prior to winding. If a mandrel that is to be removed from the winding is used, this can be realized in relatively simple manner by preparing the flavourings and the tobacco wrapper wound around the mandrel in such a way that the flavourings remain behind in the product.

The provision of flavourings can also be effected by means of a combination of the method using a retractable mandrel and a method using a lost core, when, in accordance with a further embodiment of the invention, the flavourings are provided on a lost core which remains behind in the product upon removal of the mandrel therefrom. A lost core may for instance be made from a cellulose fibre which has been impregnated and/or treated with flavourings, with the cellulose fibre being given any appropriate form and treatment so as to effect the desired release of the flavourings in optimum manner during chewing, smoking as well as sucking.

As noted before, in the preparation of the product according to the invention, a first winding must be covered at least partly by at least two further windings. This is necessary, on the one hand, to obtain a sufficiently solid cover for maintaining the core passage and, on the other hand, to obtain a sufficiently thick cover to permit handling of the product. Such a product can be wound from an elongated strip-shaped cut tobacco wrapper having a parallelogram-shaped circumference, with the angle between two adjacent sides corresponding with the pitch angle of the helical winding for manufacturing the product. If the product is prepared from such a tobacco wrapper, a substantially cylindrical body with circular end faces is obtained.

It will be clear that such one-by-one manufacture is fairly complicated and labour-intensive. In accordance with a further embodiment of the invention, it is accordingly preferred that the length of the mandrel is chosen to be a multiple of the length of the product and that after the winding operation and, depending on the type of mandrel used, removal of the mandrel, the intermediate so obtained is cut to form products of the desired length. After winding the wrapper onto this relatively long mandrel and, depending on the type

used, removing the mandrel, the product thereby obtained is cut into pieces having the desired length, with the two terminal ends, if so desired, being regarded as waste, so that in principle any shape of tobacco wrapper can be used. In contrast with the conventional one-by-one manufacture of cigars, the present method of manufacture is partly made possible by the circumstance that both ends of the products according to the invention can be straight end faces, i.e. neither end needs to be of tapering or similar configuration owing to the solid cover and the substantially open core, although such a configuration of the ends is possible.

It goes without saying that within the framework of the invention many further modifications and variants are possible. Thus, as has been noted, a lost core may be made from a cellulose fibre which can be used up in the same way as a tobacco wrapper through smoking or chewing. Naturally, the core can also be made from a material that is not used up. A removable mandrel can for instance be a solid steel wire. However, it is equally possible to use a hollow tubular body which is porous or provided with perforations, for instance to permit injection of flavourings after winding. The flavourings can be provided during the manufacturing process of the product. However, because a large range of flavourings is already available, it is also conceivable that flavourings are supplied in capsules, so that a product can be provided with the desired flavouring or flavourings for consumption. Several times, reference has been made to the winding of one tobacco wrapper. It is explicitly noted that more than one tobacco wrapper can be used and that different layers can be wound onto each other, with the helical direction of successive layers optionally being opposite. Further, in particular when a relatively long mandrel is used, it is possible to use a tobacco wrapper roll, i.e. a multiplicity of tobacco wrappers cut to size, which have subsequently been bonded to each other to form a strip of very great length, which has been rolled up for proper processing.

Claims

1. A product made from at least one tobacco wrapper which is tightly and helically wound directly around a substantially open core extending throughout the length of the product.
2. A product according to claim 1, characterized in that the core is a substantially cylindrical passage.

3. A product according to claim 1 or 2, characterized by flavourings incorporated therein, which can be drawn from the product along with air sucked through the open core.
4. A product according to any one of the preceding claims, characterized by flavourings incorporated therein, which can be drawn from the product by chewing it.
5. A method of making a product from tobacco leaf by winding at least one tobacco wrapper tightly and helically around a mandrel, the dimensions of each tobacco wrapper and the pitch angle of the helical wrapping being selected such that a first winding is covered at least partly by at least a second and a third winding and each tobacco wrapper being so processed that upon completion of the winding operation the tightly wrapped configuration is maintained even during and after the removal of the mandrel so as to obtain a substantially open core.
6. A method of making a product from tobacco leaf by wrapping at least one tobacco wrapper tightly and helically around a mandrel having a substantially open cross-section, the dimensions of each tobacco wrapper and the pitch angle of the helical wrapping being selected such that a first winding is at least partly covered by at least a second and a third winding and each tobacco wrapper being processed so that upon completion of the winding operation the tightly wrapped configuration is maintained, with the mandrel remaining behind in the product as a lost core.
7. A method according to claim 5 or 6, characterized in that as a mandrel, an elongated rod-shaped member is used.
8. A method according to claims 5 and 7, characterized in that as a mandrel a wire of varying or constant circular cross-section is used.
9. A method according to any one of claims 5-8, characterized in that flavourings are incorporated into the product.
10. A method according to claim 9, characterized in that flavourings are provided in or on a tobacco wrapper before it is wrapped.
11. A method according to claim 9 or 10, characterized in that flavourings are provided between the windings during the wrapping of a tobacco wrapper.
12. A method according to any one of claims 9-11, characterized in that flavourings are provided in the open core after a tobacco wrapper has been wrapped.
13. A method according to any one of claims 9-12, characterized in that flavourings are provided on the mandrel prior to wrapping.
14. A method according to claim 13, characterized in that when a mandrel is used which is to be withdrawn from the wrapping, the flavourings and the tobacco wrapper wound around the mandrel have been prepared in such a way that the flavourings remain behind in the product.
15. A method according to claim 14, characterized in that the flavourings are provided on a lost core which remains behind in the product upon withdrawal of the mandrel therefrom.
16. A method according to any one of claims 5-15, characterized in that the length of the mandrel is selected to be a multiple of the length of the product and that after the winding operation and, depending on the type of mandrel used, withdrawing the mandrel, the intermediate so obtained is cut into products of the desired length.



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EUROPEAN SEARCH REPORT

Application Number

EP 91 20 2835

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	US-A-1 437 956 (BLAIR) * the whole document * ---	1,2,5-8	A24B13/00 A24D1/00
A	US-A-1 520 761 (MCLEAN) * the whole document * ---	1,2,5-8	
A	DE-C-106 217 (TEISER) * the whole document * ---	1,2,5-8	
A	DE-C-862 117 (GARTHOFFNER) * the whole document * ---	16	
A	FR-A-1 168 467 (HOUCART) ---		
A	FR-A-478 650 (DULA) ---		
A	CH-A-120 791 (AUSTRIA A.G. ERZEUGUNG) ---		
A	DE-C-57 847 (MEYER) -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			A24B A24D A24F A24C
Place of search THE HAGUE		Date of completion of the search 03 FEBRUARY 1992	Examiner RIEDEL R. E.
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