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71 Applicant: Turmac Tobacco Company B.V.
Postbus 12
NL-6900 AA Zevenaar(NL)

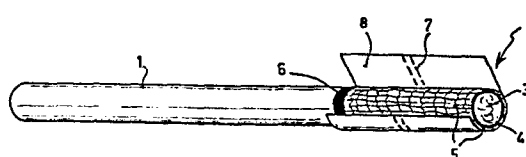
72 Inventor: Hoge, Johannes Hendrikus
Zonegge 11-16
NL-6903 GB Zevenaar(NL)

72 Inventor: van der Heide, Jan
Tollewei 29
NL-8621 CX Heeg(NL)

74 Representative: Kooy, Leendert Willem
OCTROOIBUREAU VRIESENDORP & GADE P.O. Box
266
NL-2501 AW The Hague(NL)

54 Filter cigarette.

57 A filter cigarette comprising at least a bar of cellulose acetate or other suitable filter material surrounded by a layer which is impermeable to air, and between said both items a layer of a material with an open structure, of which layer a ring adjacent to the tobacco column is sealed, has better properties and is easier to produce than a filter cigarette having grooves in the impermeable layer and the bar of filter material.



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FILTER CIGARETTE

This invention relates to a filter cigarette, comprising a tobacco column, wrapped up in cigarette paper, and a filter, which filter comprises cellulose acetate or other suitable material surrounded by a layer which is impermeable to air, such as filter wrapping paper, and surrounded by tip paper which is entirely or partly perforated or porous and which is extending over the filter wrapping paper and an end portion of the cigarette paper.

A filter for such a cigarette is known from Dutch patent application 80 01948. This known filter has filter wrapping paper which is impermeable to air in which slots are pressed in more or less regular distances around the outer periphery, which slots also locally compress the cellulose acetate. As the tip paper of the known filter is porous or is provided with perforations and none of the slots is extending over the entire length of the filter, only air would reach the mouth of the smoker through that slots when smoking a cigarette provided therewith. So the smoke would be diluted with ventilation air as it were, and that would have advantageous influence on the tar and nicotine supply of the cigarette.

The reducing of tar and nicotine outturn to be reached with this known filter seem attractive but require a production process

which guarantees that the filter wrapping paper is not separated from the cellulose acetate before or during smoking. This guarantee cannot be given apparently.

- 5 The invention aims at improve the situation as described above.

According to the invention it surprisingly appeared to be possible to position a layer of material with an open structure between the layer impermeable to air and the tip paper, of which layer
10 the ring adjacent to the tobacco column is sealed. In this way it is guaranteed that no flowing of smoke or air can take place between the tobacco column and the filter and vice versa.

The material with the open structure can be a non-woven or a
15 tissue of which the warp and weft preferably have different crimp. In the latter case the warp threads with a stronger crimp than the weft threads extend preferably in the direction of the longitudinal axis of the cigarette.

- 20 The invention is further explained with reference to the drawing in which as an example a cigarette in perspective according to the invention is shown, the tip paper being shown in the not entirely closed position.

- 25 The cigarette shown in the drawing comprises a tobacco column surrounded by cigarette paper 1 and a filter 2.

The filter, with a length of approximately 25 mm comprises in radial direction from the inside to the outside a bar of cellulose
30 acetate 3 surrounded by filter wrapping paper 4 impermeable to air. A layer 5 made of a material with an open structure is wrapped around this filter wrapping paper of which a ring 6 is sealed which is adjacent to the tobacco column. Instead of by application of

separate filter wrapping paper the layer impermeable to air 4 can also be obtained by sealing one of the surfaces of the layer 5 with open structure.

- 5 The outer periphery of the filter comprises a tip paper 8 provided with perforations 7 which is also connected to part of the cigarette paper 1 in order to achieve a connection between the tobacco column and the filter.
- 10 In the first instance for layer 5 is thought of a kind of gauze, but a non-woven material can be preferred as the visible end of the filter does not have an appearance which differs from the appearance of a normal filter cigarette.
- 15 In order to verify whether the invented cigarette shows the desired qualities in practice some experiments are carried out in which the layer 5 comprised a tissue with partly much crimp and the sealed ring had a width of about 2 mm. The whole was surrounded with tip paper 8 with two lines of a suitable
- 20 perforation 7 and by fastening a tobacco column of about 6 cm thereon, cigarettes were made with that filter. The ventilation degree of these cigarettes, that is to say the percentage of air, flowing from the sucking side which went through the perforations, appeared to be 60%. After sealing the layer 5 to the connection
- 25 with the tobacco column the average ventilation degree appeared to have descended very much. As to the tar and nicotine outturn the following changes appeared to occur after sealing:

	sucking side layer 5 open	sucking side layer 5 sealed
dry condensate minus nicotine (mg/cig.)	5.3	14.1
nicotine (mg/sig.)	0.48	0.95

Other embodiments are also covered in the scope of the drawing.

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HV/HCK/LvdM

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CLAIMS

1. Filter cigarette comprising a tobacco column, wrapped up in cigarette paper, and a filter, which filter comprises a cellulose acetate or other suitable material surrounded by a layer which is impermeable to air, such as filter wrapping paper and surrounded
5 by a tip paper which is entirely or partly perforated or porous and which is extending over the filter wrapping paper and an end portion of the cigarette paper, characterized in that between the layer (4) impermeable to air and the tip paper (8) a layer (5) made of a material with an open structure is positioned, of which layer
10 a ring (6) adjacent to the tobacco column is sealed.
2. Filter cigarette according to claim 1, characterized in that the material with an open structure is a non-woven material.
- 15 3. Filter cigarette according to claim 1, characterized in that the material with an open structure is a tissue of which the warp and weft have different crimps.
4. Filter cigarette according to claim 3, characterized in that the
20 warp threads with a stronger crimp than the weft threads extend in the direction of the longitudinal axis of the cigarette.
5. Filter cigarette as shown in the drawing and/or discussed with reference thereto.

