

(19)



(11)

EP 3 566 590 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

13.11.2019 Bulletin 2019/46

(51) Int Cl.:

A24B 15/12 (2006.01)

A24B 15/28 (2006.01)

A24B 15/32 (2006.01)

(21) Application number: **18178518.9**

(22) Date of filing: **19.06.2018**

(84) Designated Contracting States:

**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

Designated Extension States:

BA ME

Designated Validation States:

KH MA MD TN

(71) Applicant: **Shenzhen Dakavape Tech Co., Ltd.**
518000 Shenzhen, Guangdong (CN)

(72) Inventor: **Wang, Huayou**
Shenzhen, Guangdong 518000 (CN)

(74) Representative: **Sun, Yiming**
HUASUN Patent- und Rechtsanwälte
Friedrichstraße 33
80801 München (DE)

(30) Priority: **12.05.2018 CN 201810451702**

(54) **DUAL-USE CIGARETTE AND TOBACCO FILLER THEREOF**

(57) The present invention discloses a dual-use cigarette and a tobacco filter thereof, the cigarette comprises a tobacco filling segment and a filter tip segment which are wrapped by roll paper, wherein the tobacco filler in the tobacco filling segment comprises tobacco raw materials added with PG and VG, the percentage by weight

of the PG and VG in the tobacco raw materials is 5%-50%, and the percentage by weight of water content in the tobacco raw materials is 5%-10%. The present invention has the advantage that the smoke has no water bad odor and is close to common cigarettes.

EP 3 566 590 A1

Description

TECHNICAL FIELD

[0001] The present invention relates to the field of cigarettes, and in particular to a dual-use cigarette of which the smoke has no water bad odor and is close to common cigarettes, and a tobacco filter thereof.

RELATED ART

[0002] With the rising of anti-smoking campaigns at home and abroad, as well as the gradually expanded scope of smoking bans in public places at home and abroad, the research and development of heat not burning (HNB) cigarettes have become one of the research hotspots of tobacco companies in many countries in the world. The so-called HNB cigarettes refer to "the generation of smoke by heating tobacco raw material fillers in special cigarettes, and the obtaining of a cigarette-like tobacco flavor in this way", which avoids high-temperature pyrolysis of tobacco combustion of the cigarettes, thereby greatly reducing the amount of release of harmful components in generated mainstream smoke. Meanwhile, since the tobacco filler is not burnt, there is no "smoke odor" in the generated environmental smoke, thus avoiding the pollution of "secondhand smoke". However, the existing HNB cigarettes are "special cigarettes" produced by using special devices, which will not only increase the production cost of cigarette companies, but also cause inconvenience in large-scale production and promotion. Besides, the used tobacco raw materials are "rolled tobacco sheets", and the generated scent is quite different from that of conventional cigarettes and does not fully satisfy the needs of smokers. If the conventional cigarettes are used for "HNB baking", since the conventional cigarettes contain about 13% of water content, and the boiling point of water is much lower than a baking temperature, the baked smoke contains relatively severe and disgusting "water-soaked tobacco" sour odor, which seriously affects the smoking experience of customers.

SUMMARY

[0003] An objective of the present invention is to provide a tobacco filler for a dual-use cigarette of which the smoke has no water bad odor and is close to common cigarettes.

[0004] The present invention is implemented by the following technical measures: a tobacco fillet for a dual-use cigarette (conventional combustion and HNB) comprises tobacco raw materials, wherein the tobacco raw materials are added with propylene glycol (PG) and vegetable glycerin (VG), the percentage by weight of the PG and VG in the tobacco raw materials is 5%-50%, and the percentage by weight of water content in the tobacco raw materials is 5%-10%.

[0005] As a preferred embodiment, the percentage by

weight of the PG in the tobacco raw materials is 1%-49%.

[0006] As a preferred embodiment, the percentage by weight of the VG in the tobacco raw materials is 1%-49%.

[0007] As a preferred embodiment, the tobacco raw materials are filiform, granular or flaky.

[0008] The present invention further discloses a HNB cigarette, comprising a tobacco filling segment and a filter tip segment which are wrapped by roll paper, wherein a tobacco filler in the tobacco filling segment comprises tobacco raw materials added with PG and VG, the percentage by weight of the PG and VG in the tobacco raw materials is 5%-50%, and the percentage by weight of water content in the tobacco raw materials is 5%-10%.

[0009] As a preferred embodiment, the percentage by weight of the PG in the tobacco raw materials is 1%-49%.

[0010] As a preferred embodiment, the percentage by weight of the VG in the tobacco raw materials is 1%-49%.

[0011] As a preferred embodiment, the tobacco raw materials are filiform, granular or flaky.

[0012] As an embodiment, the roll paper is roll paper for cigarettes.

[0013] As an embodiment, the roll paper is roll paper for cigars.

[0014] In the present invention, since the water content is reduced to be 5% to 10%, the baked smoke has no water bad odor basically, the PG and VG are added to the tobacco filler, and meanwhile, the percentage by weight of the PG and VG is 5% to 50%, so that when the present invention is used for conventional combustion smoking, the smoke is softer and the taste is more comfortable. When the present invention is used for HNB smoking, the acid odor of "water-soaked tobacco" in the smoke when the conventional cigarettes are baked is reduced, and the smoke is closer to the scent when the conventional cigarettes are sucked. The products are caused to be more competitive.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] Fig. 1 is a sectional view of an embodiment according to the present invention.

DETAILED DESCRIPTION

[0016] The present invention is further explained in detail in combination with the embodiments and in accordance with the accompanying drawings.

[0017] A HNB cigarette, referring to Fig. 1, comprises a tobacco filling segment 3 and a filter tip segment 1 which are wrapped by roll paper 2, a tobacco filler in the tobacco filling segment 3 comprises tobacco raw materials added with PG and VG, the percentage by weight of the PG and VG in the tobacco raw materials is 5%-50%, and the percentage by weight of water content in the tobacco raw materials is 5%-10%.

[0018] Since the water content in the cigarette is reduced to be 5% to 10%, and lower than 8% preferably, the baked smoke has no water bad odor basically, the

PG and VG are added to the tobacco filler, and meanwhile, the percentage by weight of the PG and VG is 5% to 50% and about 10% preferably, and the contents of the two are the same basically, so that when the present invention is used for conventional combustion smoking, the smoke is softer and the taste is more comfortable. When the present invention is used for HNB smoking, the acid odor of "water-soaked tobacco" in the smoke when the conventional cigarettes are baked is reduced, and the smoke is closer to the scent when the conventional cigarettes are sucked. The products are caused to be more competitive.

[0019] According to the HNB cigarette of the present invention, referring to Fig. 1, based on the foregoing technical solution, specifically, the percentage by weight of the PG in the tobacco raw materials is 1%-49%.

[0020] According to the HNB cigarette of the present invention, referring to Fig. 1, based on the foregoing technical solution, specifically, the percentage by weight of the VG in the tobacco raw materials is 1%-49%.

[0021] According to the HNB cigarette of the present invention, referring to Fig. 1, based on the foregoing technical solution, specifically, the tobacco raw materials in the tobacco raw material segment 3 are filiform, and may also be granular or flaky in other embodiments.

[0022] According to the HNB cigarette of the present invention, referring to Fig. 1, based on the foregoing technical solution, specifically, the roll paper 2 is roll paper for the cigarettes. In order to improve quality of the smoke, in other embodiments, the roll paper may also be roll paper for cigars.

[0023] The foregoing elaborates the tobacco filter for a dual-use cigarette according to the present invention and is intended to help to understand the present invention. However, the embodiments of the present invention are not limited to the above embodiments, and any changes, modifications, substitutions, combinations and simplifications made without departing from the principle of the present invention should be equivalent replacement modes and are included within a protective scope of the present invention.

Claims

1. A tobacco filter for a dual-use cigarette, **characterized by** comprising tobacco raw materials, wherein the tobacco raw materials are added with PG and VG, the percentage by weight of the PG and VG in the tobacco raw materials is 5%-50%, and the percentage by weight of water content in the tobacco raw materials is 5%-10%.
2. The tobacco filter for a dual-use cigarette according to claim 1, **characterized in that** the percentage by weight of the PG in the tobacco raw materials is 1%-49%.

3. The tobacco filter for a dual-use cigarette according to claim 1, **characterized in that** the percentage by weight of the VG in the tobacco raw materials is 1%-49%.
4. The tobacco filter for a dual-use cigarette according to claim 1 or 2, **characterized in that** the tobacco raw materials are filiform, granular or flaky.
5. A HNB cigarette, **characterized by** comprising a tobacco filling segment and a filter tip segment which are wrapped by roll paper, wherein a tobacco filler in the tobacco filling segment comprises tobacco raw materials added with PG and VG, the percentage by weight of the PG and VG in the tobacco raw materials is 5%-50%, and the percentage by weight of water content in the tobacco raw materials is 5%-10%.
6. The HNB cigarette according to claim 5, **characterized in that** the percentage by weight of the PG in the tobacco raw materials is 1%-49%.
7. The HNB cigarette according to claim 5, **characterized in that** the percentage by weight of the VG in the tobacco raw materials is 1%-49%.
8. The HNB cigarette according to claim 5, **characterized in that** the tobacco raw materials are filiform, granular or flaky.
9. The HNB cigarette according to claim 5, **characterized in that** the roll paper is roll paper for cigarettes.
10. The HNB cigarette according to claim 5, **characterized in that** the roll paper is roll paper for cigars.

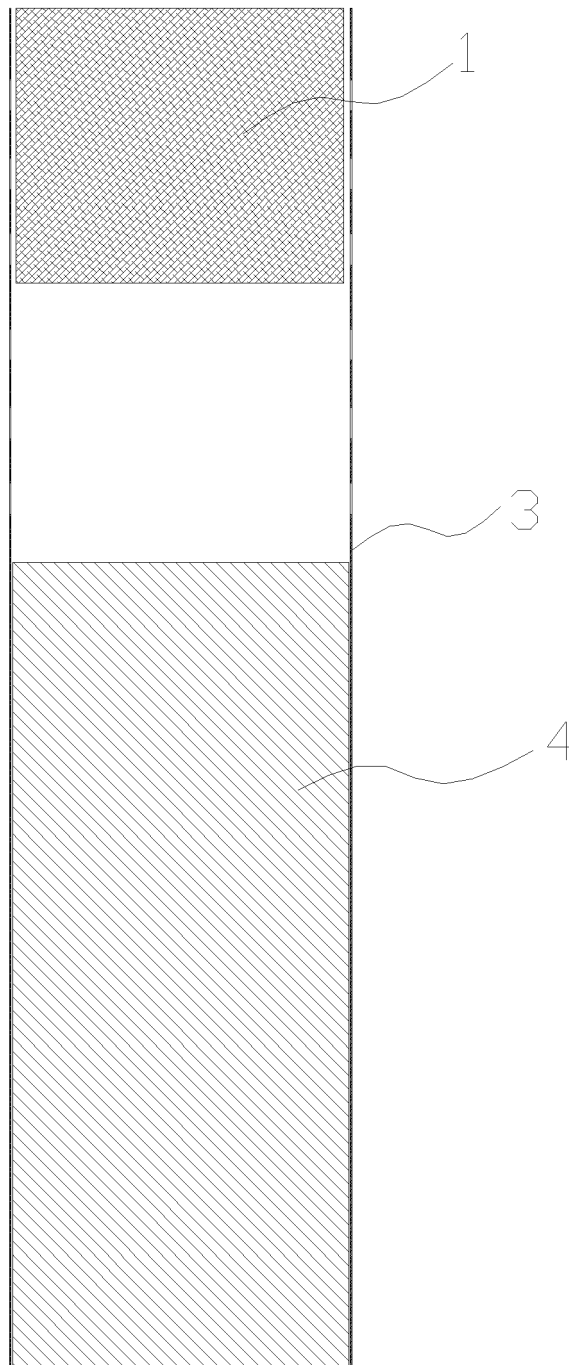


Fig. 1



EUROPEAN SEARCH REPORT

Application Number
EP 18 17 8518

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2017/097840 A1 (BRITISH AMERICAN TOBACCO LTD [GB]) 15 June 2017 (2017-06-15) * Fig 5, Nr. 205; page 6, 1st paragr., page 5, 2nd paragr.; page 5, line 13 - line 15; examples 1,4 *	1-10	INV. A24B15/12 A24B15/28 A24B15/32
X	WO 2005/032285 A1 (REYNOLDS TOBACCO CO R [US]; NESTOR TIMOTHY BRIAN [US] ET AL.) 14 April 2005 (2005-04-14) * page 32, line 15 - line 22; figures 1,2 *	1-4	
A	WO 2017/051034 A1 (LTR IND [FR]) 30 March 2017 (2017-03-30) * example 3 *	5-10	
A	WO 2014/177696 A1 (JT INT SA [CH]) 6 November 2014 (2014-11-06) * paragraph [0035]; claim 13 *	5-10	
			TECHNICAL FIELDS SEARCHED (IPC)
			A24B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29 May 2019	Examiner Villányi Kelemen, K
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 17 8518

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-05-2019

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2017097840 A1	15-06-2017	AR 106909 A1	28-02-2018
		AU 2016365701 A1	07-06-2018
		BR 112018011281 A2	27-11-2018
		CA 3006621 A1	15-06-2017
		CL 2018001496 A1	24-08-2018
		CN 108366614 A	03-08-2018
		EP 3386322 A1	17-10-2018
		JP 2019503659 A	14-02-2019
		KR 20180069092 A	22-06-2018
		PH 12018501059 A1	28-01-2019
		US 2018360099 A1	20-12-2018
		WO 2017097840 A1	15-06-2017
WO 2005032285 A1	14-04-2005	AT 354296 T	15-03-2007
		DE 602004004919 T2	08-11-2007
		EP 1670326 A1	21-06-2006
		ES 2278350 T3	01-08-2007
		JP 4388960 B2	24-12-2009
		JP 4943477 B2	30-05-2012
		JP 2007507231 A	29-03-2007
		JP 2009254387 A	05-11-2009
		WO 2005032285 A1	14-04-2005
WO 2017051034 A1	30-03-2017	AU 2016328781 A1	19-04-2018
		CA 2999651 A1	30-03-2017
		CN 108471802 A	31-08-2018
		EP 3352590 A1	01-08-2018
		FR 3041507 A1	31-03-2017
		JP 2018529383 A	11-10-2018
		KR 20180081502 A	16-07-2018
		WO 2017051034 A1	30-03-2017
WO 2014177696 A1	06-11-2014	CA 2910682 A1	06-11-2014
		CN 105357986 A	24-02-2016
		CN 109619654 A	16-04-2019
		EA 201591982 A1	29-04-2016
		EP 2991511 A1	09-03-2016
		JP 2016516441 A	09-06-2016
		KR 20160003859 A	11-01-2016
		US 2016066617 A1	10-03-2016
		US 2019104760 A1	11-04-2019
		WO 2014177696 A1	06-11-2014

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82