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AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
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DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,

HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KH, KN, KP, KR,
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(54) Title: SHAVING APPARATUS

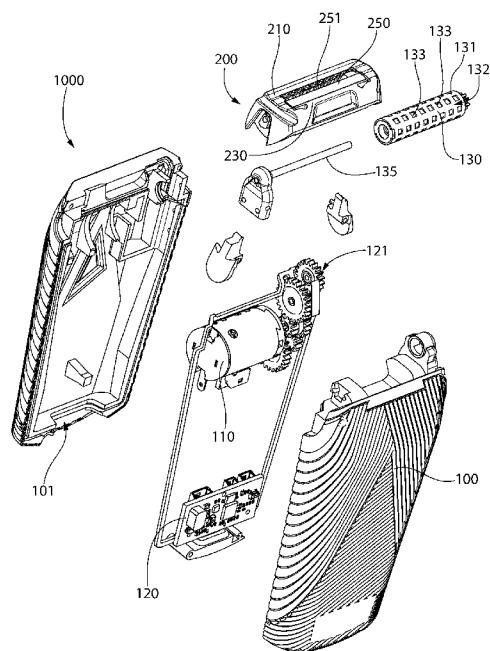


FIG. 2

(57) Abstract: A shaving apparatus 1000 is disclosed in which a rotary cutter 130 and a blade 250 are used to shear a user's hairs therebetween during a shaving process. Various advancements are disclosed herein, including without limitation accurate positioning of the blade relative to the rotary cutter, pivoting of a refill blade assembly 200 relative to a base portion 100 of the shaving apparatus to which it is coupled, and a connection between the refill blade assembly and the base portion of the shaving apparatus. Furthermore, a method of shaving is also disclosed.



INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2017/000525

A. CLASSIFICATION OF SUBJECT MATTER
INV. B26B19/18
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B26B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 690 007 A (JONATHAN NEIDIG WILLIAM) 28 September 1954 (1954-09-28)	1,4-10, 18-20, 24,27, 35, 101-107, 109-111
A	column 3, line 26 - column 5, line 69; figures 1-4	2,3, 11-17, 25,26, 28-34
X	----- US 2 367 686 A (JONATHAN NEIDIG WILLIAM) 23 January 1945 (1945-01-23) page 3, column 1, lines 9-13; figures 1-3 ----- -/-	1, 101-103, 105-107, 109-111



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2017/000525

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2012/000075 A1 (BEN-ARI TSAFRIR [IL]) 5 January 2012 (2012-01-05) paragraphs [0052] - [0063]; figures 3-5 -----	1-20, 24-35, 101-107, 109-111

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2017/000525

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2690007	A	28-09-1954	NONE	

US 2367686	A	23-01-1945	NONE	

US 2012000075	A1	05-01-2012	US 2012000075 A1	05-01-2012
			US 2014096397 A1	10-04-2014

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2017/000525

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-20, 24-35, 101-107, 109-111

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-20, 24-35, 101-107, 109-111

A shaving apparatus comprising a rotary cutter comprising a plurality of cutting edges, a blade having a cutting edge, the blade mounted to a spring member, the blade biased into contact with the rotary cutter by the spring member, wherein the spring member is comprised of specific types of a spring member.

2. claims: 21-23, 53-80

A shaving apparatus comprising a rotary cutter comprising a plurality of cutting edges, a blade having a cutting edge, the blade mounted to a spring member, the blade biased into contact with the rotary cutter by the spring member, wherein the shaving apparatus further comprises a base portion, a cover member, the spring member connected to the cover member so that the cutting edge of the blade at least partially defines a work window, wherein the cover member is pivotable relative to the base portion about a pivot axis that is coincident with the rotational axis of the rotary cutter.

3. claims: 36-52

A refill blade assembly comprising inter alia a specific type of cover member and one or more coupling elements configured to detachably couple the cover member to a base portion of a shaving apparatus.

4. claims: 81-98

A shaving apparatus comprising a base portion, a rotary cutter mounted to the base portion so as to be rotatable relative to the base portion about a rotational axis, a blade assembly comprising a cover member having a first end wall, a second end wall, and a specific top surface having a work window, and a blade having a cutting edge, the blade mounted to the cover member so that the cutting edge of the blade at least partially defines the work window.

5. claims: 99, 100, 108

A refill blade assembly comprising a cover member, a blade having a cutting edge, the blade mounted to the cover member, a distal-most working surface that contacts the user's skin during use of the refill blade assembly, a work window in the distal-most working surface, the work window

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

at least partially defined by the cutting edge of the blade,
and wherein the working surface has specific length
proportions with respect to several parts of the refill
blade assembly.
