



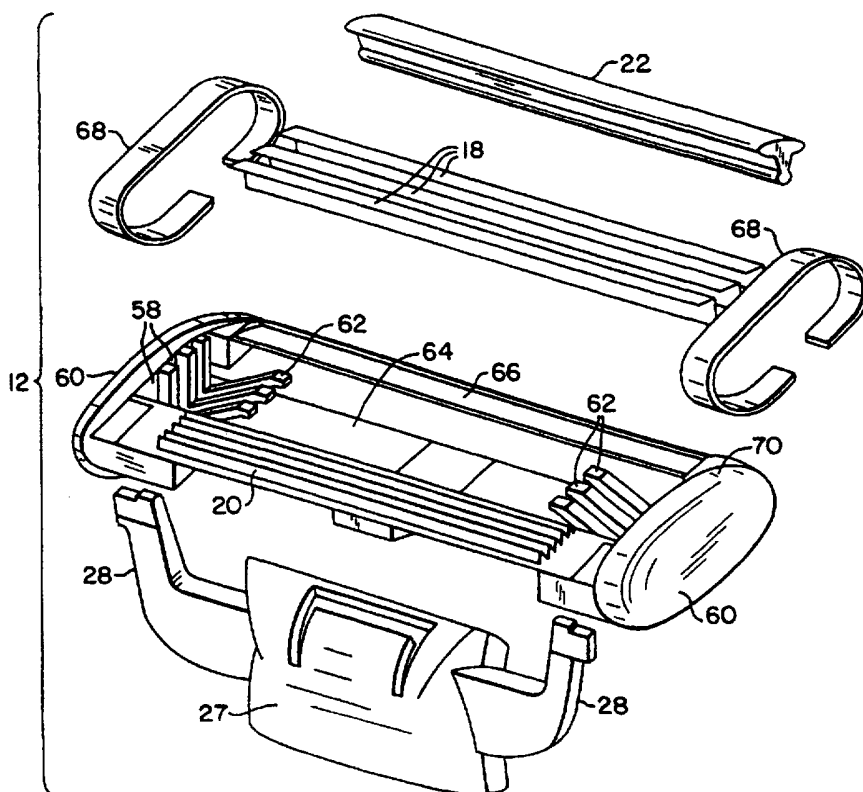
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification <sup>6</sup> : <b>B26B 21/22, 21/52</b></p>	<p>A3</p>	<p>(11) International Publication Number: <b>WO 97/37819</b> (43) International Publication Date: 16 October 1997 (16.10.97)</p>
<p>(21) International Application Number: PCT/US97/05697 (22) International Filing Date: 8 April 1997 (08.04.97) (30) Priority Data: 08/630,437 10 April 1996 (10.04.96) US (60) Parent Application or Grant (63) Related by Continuation US 08/630,437 (CON) Filed on 10 April 1996 (10.04.96) (71) Applicant (for all designated States except US): THE GILLETTE COMPANY [US/US]; Prudential Tower Building, Boston, MA 02199-8004 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): APPRILLE, Domenic, Vincent, Jr. [US/US]; 70 Decatur Street, Arlington, MA 02174 (US). CHAULK, Donald, Robert [US/US]; 3 Nesting Way, E. Sandwich, MA 02537 (US). FUCCI, Joseph, George [US/US]; 42 Tavern Wave, Hanson, MA 02341 (US). METCALF, Stephen, Cabot [US/US]; 16 Adella Avenue, West Newtown, MA 02157 (US). TROTTA, Robert, Anthony [US/US]; 312 West Elm Street, Pembroke, MA</p>	<p>02359 (US). WORRICK, Charles, Bridgham, III [US/US]; 586 Whitman Street, Hanson, MA 02341 (US). (74) Agents: GALLOWAY, Peter, D.; Ladas &amp; Parry, 26 West 61st Street, New York, NY 10023 (US) et al. (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 5 March 1998 (05.03.98)</p>	

(54) Title: SHAVING SYSTEM AND METHOD

(57) Abstract

A shaving system includes a replaceable shaving cartridge (14) and a shaving razor handle (12). The replaceable shaving cartridge (14) has a housing carrying (16) blades (18), a guard (20), a cap (22), and a camming surface. The cartridge includes an interconnect member (24) having a pivotal support structure that pivotally supports the housing (16) and a base structure (27) adapted to be removably and fixedly attached to the handle (12). A shaving razor handle (12) has an elongated hand gripping structure and a cartridge support structure extending from an end of the hand gripping structure. The cartridge support structure has an extension (26) with outer side surfaces that mate with inwardly directed surfaces of a recess (130) on the cartridge and an end surface with an opening. The extension has an asymmetrical shape to ensure proper orientation. A spring-biased plunger (44) is retained in the cartridge support structure and extends through the opening of the cartridge support structure.



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# INTERNATIONAL SEARCH REPORT

Internat. Application No  
PCT/US 97/05697

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 6 B26B21/22 B26B21/52

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)  
IPC 6 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 practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 93 20983 A (THE GILLETTE COMPANY) 28 October 1993 see page 4, line 24 - page 6, line 25; figures 1-6	1,45,103
A	---	
A	US 4 283 850 A (THE GILLETTE COMPANY) 18 August 1981 see the whole document	1,45,103
A	---	
A	EP 0 203 527 A (MERKUR) 3 December 1986 see page 3; figures 1-5	1,103
A	---	
A	US 4 266 340 A (WARNER-LAMBERT COMPANY) 12 May 1981 see the whole document	1,103
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

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Date of the actual completion of the international search

22 December 1997

Date of mailing of the international search report

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## INTERNATIONAL SEARCH REPORT

Internat Application No

PCT/US 97/05697

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 36 35 553 A (KÖPPEN) 21 April 1988  see column 5, line 27 - column 8, line 43; figures 1A,1B,1C  ---	2,36,49, 77,88, 98,102
A	WO 94 08761 A (THE GILLETTE COMPANY) 28 April 1994  see page 5, line 6 - page 9, line 32; figures 1-9  ---	2,36,49, 77,88, 98,102
A	FR 2 639 280 A (IZOARD) 25 May 1990  see the whole document  ---	2,36,49, 77,88, 98,102
A	WO 95 10398 A (WARNER-LAMBERT COMPANY) 20 April 1995  see page 3, line 30 - page 5, line 37; figures 1-6  ---	2,36,49, 77,88, 98,102
X	US 5 497 551 A (APPRILLE) 12 March 1996 see the whole document  ---	72
A	US 5 027 511 A (MILLER) 2 July 1991 see the whole document  -----	72

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 97/05697

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

1. Claims: 1, 45, 103 and their dependent claims;
  2. Claims: 2, 36, 49, 77, 88, 98, 102 and their dependent claims;
  3. Claim: 72 and its dependent claim.
- 
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 fee, this Authority did not invite payment of any additional fee.
  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.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 97/05697

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