

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 September 2006 (21.09.2006)

PCT

(10) International Publication Number
WO 2006/097306 A3

- (51) International Patent Classification:
B41F 17/00 (2006.01) **B29D 11/00** (2006.01)
- (21) International Application Number:
PCT/EP2006/002420
- (22) International Filing Date: 16 March 2006 (16.03.2006)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
05005980.7 18 March 2005 (18.03.2005) EP
- (71) Applicant (for all designated States except AT, US): **NOVARTIS AG** [CH/CH]; Lichtstrasse 35, CH-4056 Basel (CH).
- (71) Applicant (for AT only): **NOVARTIS PHARMA GMBH** [AT/AT]; Brunner Strasse 59, A-1230 Vienna (AT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **FISCHER, Alfred** [DE/DE]; Hintermauer 7A, 63843 Niedernberg (DE). **DÖRR, Norbert** [DE/DE]; Kantstr. 14, 64347 Griesheim (DE). **WOLZ, Stefan** [DE/DE]; Friehofstr. 23, 63868 Grosswallstadt (DE). **BROTSMANN, Peter** [DE/DE]; Wilhelm Hefner Str. 7, 63785 Obernburg (DE). **SCHMITTNER, Stefan** [DE/DE]; Bachstr. 10, 63856 Bessenbach (DE).

- (74) Agent: **LIPHARDT, Bernd**; Novartis AG, Corporate Intellectual Property, CH-4002 Basel (CH).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

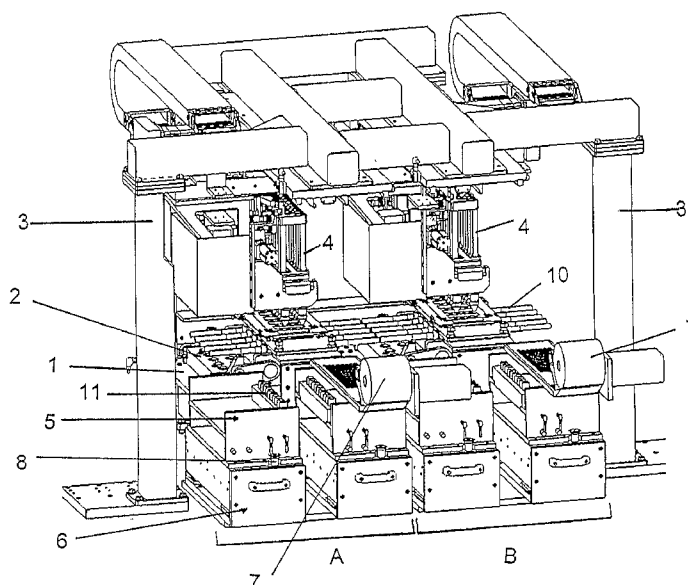
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:

— with international search report

[Continued on next page]

(54) Title: PAD PRINTING APPARATUS FOR MAKING COLORED CONTACT LENSES



(57) Abstract: The invention provides a printing station for producing colored contact lenses with high quality color images. The printing station of the invention comprises: (a) a transport system (1) to carry and transport a molding tool (2) which comprises at least one contact lens forming mold; (b) a pad unit (4) comprising at least one pad, - (c) a blade unit (5) suitable to carry and ink a cliché (9) with an ink; wherein when in use the pad transfers an inked image from the cliché to the contact lens forming mold; d) curing means to at least partially cure the inked image after it has been transferred to the mold; (d) cleaning means to clean the pad/s (7). The printing station is preferably integrated in a partially or fully automated contact lens production line.

WO 2006/097306 A3



(88) Date of publication of the international search report:

1 March 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/002420

A. CLASSIFICATION OF SUBJECT MATTER
INV. B41F17/00 B29D11/00

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)
B41F B29D

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)

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.
Y	US 6 393 981 B1 (ROBERT CAMERON) 28 May 2002 (2002-05-28) see abstract column 1, line 6 - column 7, line 13; figures 1-7	1-10
Y	US 5 637 265 A (MISCIAGNO FRANK V.) 10 June 1997 (1997-06-10) see abstract column 1, line 21 - column 5, line 15; figures 1-19 column 12, line 5 - column 14, line 30	1-10
A	DE 19 16 629 A (CESKOSLOVENSKA AKADEMIE VED., PRAG) 30 October 1969 (1969-10-30) the whole document	1-10
	----- -/--	

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 document 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
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

27 October 2006

Date of mailing of the international search report

08/11/2006

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Greiner, Ernst

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/002420

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 357 062 A (LABORATORIO PFÖRTNER CORNEALENT S.A.C.I.F.) 7 March 1990 (1990-03-07) the whole document -----	1-10
A	EP 0 262 832 A (MED OPTICS CORP.) 6 April 1988 (1988-04-06) the whole document -----	1-10
A	WO 98/42497 A (NOVARTIS AG) 1 October 1998 (1998-10-01) cited in the application the whole document -----	1-10
A	EP 0 941 829 A (NOVARTIS AG ET AL.) 15 September 1999 (1999-09-15) cited in the application the whole document -----	1-10
A	EP 0 641 806 A (CIBA-GEIGY AG) 8 March 1995 (1995-03-08) cited in the application the whole document -----	1-10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2006/002420

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6393981	B1	28-05-2002	US 6123021 A 26-09-2000
US 5637265	A	10-06-1997	NONE
DE 1916629	A	30-10-1969	FR 2005606 A5 12-12-1969 GB 1237629 A 30-06-1971 JP 54002856 B 14-02-1979 US 3679504 A 25-07-1972
EP 0357062	A	07-03-1990	AR 248194 A1 30-06-1995 AU 627215 B2 20-08-1992 AU 4029989 A 08-03-1990 BR 8904333 A 17-04-1990 CA 1330692 C 19-07-1994 DE 68915369 D1 23-06-1994 DE 68915369 T2 25-08-1994 ES 2053891 T3 01-08-1994 IL 91485 A 18-08-1993 JP 2153313 A 13-06-1990 MX 173769 B 25-03-1994
EP 0262832	A	06-04-1988	AU 588131 B2 07-09-1989 AU 7842687 A 24-03-1988 BR 8705190 A 24-05-1988 CA 1299821 C 05-05-1992 DE 3781491 D1 08-10-1992 DE 3781491 T2 04-03-1993 ES 2035075 T3 16-04-1993 GR 3006164 T3 21-06-1993 KR 9608586 B1 28-06-1996 NZ 221785 A 27-01-1989 US 4811662 A 14-03-1989 US 4872405 A 10-10-1989 ZA 8706883 A 17-03-1988
WO 9842497	A	01-10-1998	AT 281927 T 15-11-2004 AU 731550 B2 05-04-2001 AU 7209398 A 20-10-1998 BR 9807894 A 21-03-2000 CA 2282090 A1 01-10-1998 CN 1251065 A 19-04-2000 DE 69827481 D1 16-12-2004 DE 69827481 T2 27-10-2005 EP 0969956 A2 12-01-2000 ID 29303 A 16-08-2001 JP 2001518028 T 09-10-2001 NO 994654 A 22-11-1999 NZ 337346 A 29-06-2001 TW 422772 B 21-02-2001 ZA 9802473 A 25-09-1998
EP 0941829	A	15-09-1999	NONE
EP 0641806	A	08-03-1995	AT 162814 T 15-02-1998 AT 251183 T 15-10-2003 AU 2357997 A 14-08-1997 AU 680507 B2 31-07-1997 AU 6880294 A 16-02-1995

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2006/002420

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0641806	A	BR 9403174 A	11-04-1995
		CA 2129461 A1	07-02-1995
		CN 1108175 A	13-09-1995
		CZ 9401869 A3	15-02-1995
		CZ 291162 B6	15-01-2003
		DE 59405162 D1	05-03-1998
		DE 59410329 D1	06-11-2003
		DK 641806 T3	21-09-1998
		DK 0790258 T3	09-02-2004
		ES 2112503 T3	01-04-1998
		ES 2208779 T3	16-06-2004
		FI 943614 A	07-02-1995
		FI 20030475 A	31-03-2003
		GR 3026098 T3	29-05-1998
		HK 1005338 A1	31-12-1998
		HU 69048 A2	28-08-1995
		IL 110487 A	24-07-2001
		JP 2914872 B2	05-07-1999
		JP 7088850 A	04-04-1995
		NO 942907 A	07-02-1995
		NO 974192 A	07-02-1995
		NZ 264175 A	19-12-1997
		PL 304580 A1	20-02-1995
		PT 790258 T	27-02-2004
		RU 2141896 C1	27-11-1999
		SG 49623 A1	20-03-2001
		US 5508317 A	16-04-1996
		ZA 9405872 A	06-02-1995
