



- (51) International Patent Classification:
B62D 35/00 (2006.01) *B62D 37/02* (2006.01)
- (21) International Application Number:
PCT/IB2016/053009
- (22) International Filing Date:
23 May 2016 (23.05.2016)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
15169202.7 26 May 2015 (26.05.2015) EP
102015117836.2 20 October 2015 (20.10.2015) DE
- (71) Applicant: **SMR PATENTS S.A.R.L.** [LU/LU]; Le Dôme, 2-8 Avenue Charles de Gaulle, 1653 Luxembourg (LU).
- (72) Inventors: **HERRMANN, Andreas**; In der Au 29, 71364 Winnenden-Baach (DE). **KOSIDLO, Urszula**; Heimstr. 20, 70825 Korntal-Münchingen (DE). **ERHART, Volker**; Ringstraße 92, 73257 Köngen (DE).
- (74) Agent: **WEBER-BRULS, Dorothee**; Jones Day, NEX-TOWER, Thurn-und-Taxis-Platz 6, 60313 Frankfurt/Main (DE).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

- (88) Date of publication of the international search report:
12 January 2017

(54) Title: SPOILER IN A REAR VIEW MIRROR OF A VEHICLE

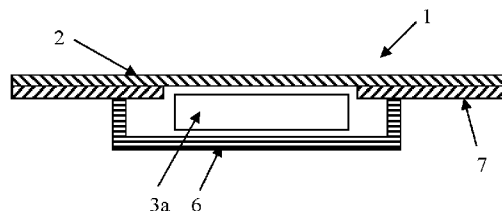
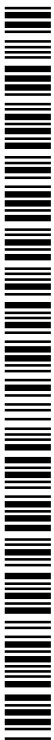


Fig. 1

(57) Abstract: The present invention relates to a spoiler (1, 1', 1'') in a rear view mirror for a vehicle for optimizing airflow, the spoiler (1, 1', 1''). The spoiler (1, 1', 1'') comprises a flexible surface layer (2, 2', 2'') which is reversibly deformable and which is arranged to cover an opening (4, 4', 4'') in a surface (5) of the rear view mirror. The spoiler (1, 1', 1'') comprises at least one stamp (3a, 3a', 3a'', 3b) comprising active material for deforming the flexible surface layer (2, 2', 2''), wherein the at least one stamp (3a, 3a', 3a'', 3b) is adapted to translate between a retracted and a deployed position.



INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2016/053009

A. CLASSIFICATION OF SUBJECT MATTER
INV. B62D35/00 B62D37/02
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)
B62D B64C F15D B60R

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.
Y A	US 2008/128560 A1 (HYDE RODERICK A [US] ET AL) 5 June 2008 (2008-06-05) abstract; figures 6-8b,12,17 paragraph [0059] - paragraph [0061] paragraphs [0066], [0072] -----	1-6,8-11 7,12
Y A	US 2002/105742 A1 (JEON JUN-SUNG [KR] ET AL) 8 August 2002 (2002-08-08) paragraph [0001] - paragraph [0094]; figures -----	1-6,8-11 7,12
Y A	WO 2009/101001 A1 (THALES SA [FR]; SIMON GEORGES-HENRI [FR]) 20 August 2009 (2009-08-20) figures page 1, line 1 - page 14, line 16 ----- -/--	1-3,5, 8-11 4,6,7,12

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

"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

"&" document member of the same patent family

Date of the actual completion of the international search 22 November 2016	Date of mailing of the international search report 01/12/2016
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer D'Sylva, Christophe

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2016/053009

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2003/048552 A1 (MARTINSON LOWELL [US]) 13 March 2003 (2003-03-13)	1-3,5, 8-11
A	paragraph [0001] - paragraph [0030]; figures	4,6,7,12
A	----- EP 1 281 573 A2 (MURAKAMI CORP [JP]) 5 February 2003 (2003-02-05)	1,11
A	paragraph [0006] - paragraph [0037]; figures	
A	----- US 2006/096365 A1 (BROWNE ALAN L [US] ET AL) 11 May 2006 (2006-05-11)	1
	figures paragraph [0004] - paragraph [0044] -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/IB2016/053009

Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
US 2008128560	A1	05-06-2008	NONE	

US 2002105742	A1	08-08-2002	JP 3086742 U	05-07-2002
			US 2002105742 A1	08-08-2002

WO 2009101001	A1	20-08-2009	AT 517031 T	15-08-2011
			CA 2715116 A1	20-08-2009
			CN 102066196 A	18-05-2011
			EP 2244940 A1	03-11-2010
			FR 2927377 A1	14-08-2009
			RU 2010137681 A	20-03-2012
			US 2011224846 A1	15-09-2011
			WO 2009101001 A1	20-08-2009

US 2003048552	A1	13-03-2003	NONE	

EP 1281573	A2	05-02-2003	EP 1281573 A2	05-02-2003
			JP 3717823 B2	16-11-2005
			JP 2003112573 A	15-04-2003
			US 2003026008 A1	06-02-2003

US 2006096365	A1	11-05-2006	US 2006096365 A1	11-05-2006
			US 2006096366 A1	11-05-2006
			WO 2006052447 A2	18-05-2006
