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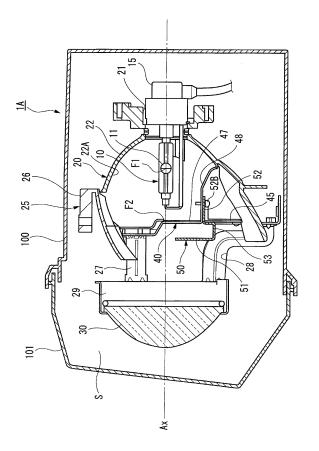
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(54) Vehicle headlamp

(57)A vehicle headlamp (1A, 1B, 1C) is provided which includes a light source (11), a projection lens (30) that is disposed in front of the light source (11) and which projects light from the light source (11) to the front, a first shield member (40) that is disposed near a rear focal point of the projection lens (30) and which can switch light distribution patterns between at least one of a right high beam light distribution pattern and a left high beam light distribution pattern in both of which light from the light source (11) is partially cut off and at least one of a normal high beam light distribution pattern in which no part of light from the light source (11) is cut off and a low beam pattern, and a second shield member (50) that is disposed in a position which is spaced by a predetermined distance forwards or rearwards away from the rear focal point of the projection lens (30) and which cuts off light of a high beam which illuminates an upper area.

FIG. 1



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CLASSIFICATION OF THE APPLICATION (IPC)

TECHNICAL FIELDS SEARCHED (IPC)

F21S F21W

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Relevant

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DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document with indication, where appropriate, Category of relevant passages 10 EP 2 154 426 A2 (KOITO MFG CO LTD [JP]) 17 February 2010 (2010-02-17) Χ 1-4 * paragraphs [0061] - [0066]; figures 1,6A-6F * EP 2 399 776 A2 (KOITO MFG CO LTD [JP]) Χ 1-4 15 28 December 2011 (2011-12-28) * figures 1,3,10 * EP 2 246 614 A2 (KOITO MFG CO LTD [JP]) 3 November 2010 (2010-11-03) Χ 1-4 20 * figures 1,7,9 * JP 2011 065960 A (KOITO MFG CO LTD) Χ 1-4 31 March 2011 (2011-03-31) * figures 3,7 * 25 χ JP 2009 227088 A (KOITO MFG CO LTD) 1-4 8 October 2009 (2009-10-08) * figures 1,4 * 30 35 40 45 The present search report has been drawn up for all claims 2 Place of search Date of completion of the search 50 Munich 15 February 2018 CATEGORY OF CITED DOCUMENTS 1503 03.82

Examiner Guénon, Sylvain T: theory or principle underlying the invention
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[&]amp; : member of the same patent family, corresponding

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EP 13 16 5060

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15-02-2018

10	Patent document cited in search report		Publication date		Patent family member(s)	Publication date
45	EP 2154426	<u> </u> A2	17-02-2010	EP JP JP	2154426 A2 5107821 B2 2010040459 A	17-02-2010 26-12-2012 18-02-2010
15	EP 2399776	A2	28-12-2011	EP JP JP	2399776 A2 5539796 B2 2012009264 A	28-12-2011 02-07-2014 12-01-2012
20	EP 2246614	A2	03-11-2010	EP JP	2246614 A2 2010257909 A	03-11-2010 11-11-2010
	JP 2011065960	Α	31-03-2011	JP JP	5476074 B2 2011065960 A	23-04-2014 31-03-2011
25	JP 2009227088	Α	08-10-2009	JP JP	5260098 B2 2009227088 A	14-08-2013 08-10-2009
30						
35						
40						
45						
50						
55	FORM P0459					

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