



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
13.05.2015 Bulletin 2015/20

(51) Int Cl.:
F21S 8/12 (2006.01) **F21S 8/10** (2006.01)
F21Y 101/02 (2006.01)

(43) Date of publication A2:
20.03.2013 Bulletin 2013/12

(21) Application number: **12006319.3**

(22) Date of filing: **07.09.2012**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(71) Applicant: **Stanley Electric Co., Ltd.**
Meguro-ku
Tokyo 153-8636 (JP)

(72) Inventor: **Tanaka, Hidemi**
Tokyo 153-8636 (JP)

(30) Priority: **13.09.2011 JP 2011199844**

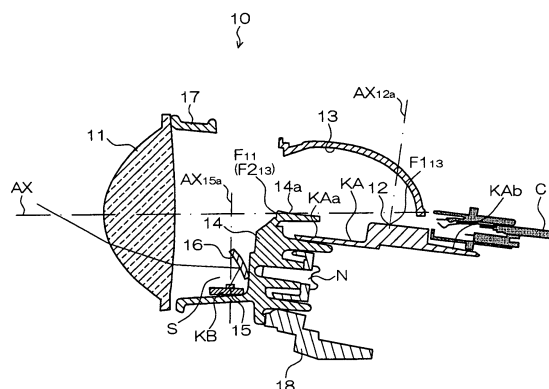
(74) Representative: **Wimmer, Hubert**
WAGNER & GEYER
Gewürzmühlstrasse 5
80538 München (DE)

(54) **Vehicle headlamp**

(57) A vehicle lighting unit capable of achieving a plurality of functions of lamps such as a low-beam headlamp and a daytime running lamp at the same time is provided. The vehicle lighting unit (10) can include: a projection lens (11) disposed on an optical axis (AX) extending along a front-to-rear direction of a vehicle and having a rear focal point (F_{11}); a first lamp constituent member (12, 13, 14) to constitute a first lamp together with the projection lens (11); and a second lamp constituent member (15, 16) to constitute a second lamp together with the projection lens (11). The first lamp constituent member (12, 13, 14) can include: a first semiconductor light emitting device (12) disposed on or near the optical axis (AX) and behind the rear focal point (F_{11}) of the projection lens (11) so as to emit light substantially upward; a first reflecting surface (13) of a revolved ellipsoid having a first focal point (F_{113}) set at or near the first semiconductor light emitting device (12) and a second focal point (F_{213}) at or near the rear focal point (F_{11}) of the projection lens (11), the first reflecting surface (13) being disposed above the first semiconductor light emitting device (12) so that light emitted from the first semiconductor light emitting device (12) can be incident thereon; and a first light-shielding member (14) disposed in between the projection lens (11) and the first semiconductor light emitting device (12) so as to shield part of light emitted from the first semiconductor light emitting device (12). The second lamp constituent member (15, 16) can include: a second semiconductor light emitting device (15) disposed in a space (S) between the first light-shielding member (14)

and a light path of light from the first semiconductor light emitting device (12) to pass through the projection lens (11), so as not to shield light passing through the projection lens (11), the second semiconductor light emitting device (15) being disposed so as to emit light substantially upward; and a second reflecting surface (16) disposed in the space (S) and above the second semiconductor light emitting device (15) so as to receive the light emitted from the second semiconductor light emitting device (15) and reflect the light toward the projection lens (11) to allow the light to pass through the projection lens (11) forward.

Fig. 1





EUROPEAN SEARCH REPORT

Application Number
EP 12 00 6319

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2008/062709 A1 (MOCHIZUKI KAZUHISA [JP] ET AL) 13 March 2008 (2008-03-13) * paragraphs [0025] - [0030]; figure 5 *	1-4	INV. F21S8/12 F21S8/10 F21Y101/02
X	US 2007/201241 A1 (KOMATSU MOTOHIRO [JP]) 30 August 2007 (2007-08-30) * abstract; figures 8,10 *	1-4	
X	EP 2 194 312 A2 (KOITO MFG CO LTD [JP]) 9 June 2010 (2010-06-09) * abstract; figure 5 *	1-4	
X	US 2006/120094 A1 (TSUKAMOTO MICHIO [JP] ET AL) 8 June 2006 (2006-06-08) * abstract; figures 1,4,7,8 *	1-4	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			F21S
Place of search		Date of completion of the search	Examiner
Munich		31 March 2015	Panatsas, Adam
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

 1
EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 12 00 6319

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

31-03-2015

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2008062709 A1	13-03-2008	CN 101144579 A	19-03-2008	
		JP 4969958 B2	04-07-2012	
		JP 2008071555 A	27-03-2008	
		KR 20080024978 A	19-03-2008	
		US 2008062709 A1	13-03-2008	

US 2007201241 A1	30-08-2007	DE 102007008994 A1	20-09-2007	
		JP 4663548 B2	06-04-2011	
		JP 2007227228 A	06-09-2007	
		US 2007201241 A1	30-08-2007	

EP 2194312 A2	09-06-2010	EP 2194312 A2	09-06-2010	
		JP 5264448 B2	14-08-2013	
		JP 2010135076 A	17-06-2010	
		US 2010135037 A1	03-06-2010	

US 2006120094 A1	08-06-2006	JP 4413762 B2	10-02-2010	
		JP 2006164735 A	22-06-2006	
		US 2006120094 A1	08-06-2006	
