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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JEREMY A. FOGG, GREGORY M. EJSMONT,  
DARIN D. TUTTLE, and JOSEPH S. STAM

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Appeal 2011-000089  
Application 10/783,273  
Technology Center 2800

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Before JOSEPH F. RUGGIERO, DENISE M. POTHIER, and  
JAMES B. ARPIN, *Administrative Patent Judges*.

POTHIER, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-7 and 20-23. Claims 8-19 have been canceled. App. Br. 3.<sup>1</sup> An oral hearing was conducted January 15, 2013. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

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<sup>1</sup> Throughout this opinion, we refer to the Supplemental Appeal Brief (App. Br.) filed October 25, 2007, the Examiner's Answer (Ans.) mailed April 17, 2006, and the Reply Brief (Reply Br.) filed June 19, 2006.

*Invention*

Appellants' invention relates to an automatic vehicle exterior light control system that includes an automated switching feature between high and low beams. *See Spec.* ¶¶ 0002, 0005. Claim 1 is reproduced below with the key disputed limitations emphasized:

1. An automatic vehicle exterior light control system, comprising:  
*an attachment member and carrier/baffle configured to secure an imager board within approximately 5 degrees and approximately -5 degrees of a desired image sensor optical axis.*

*The Rejections*

The Examiner relies on the following as evidence of unpatentability:

Michaels	US 5,124,549	June 23, 1992
Blank	US 5,708,410	Jan. 13, 1998
Stam	US 6,429,594 B1	Aug. 6, 2002

Claims 1, 3, 4, and 20 are rejected under 35 U.S.C. § 102(b) as anticipated by Michaels. Ans. 3.<sup>2</sup>

Claims 6, 7, 21, and 22 are rejected under 35 U.S.C. § 103(a) as unpatentable over Michaels. Ans. 3-4.

Claim 2 is rejected under 35 U.S.C. § 103(a) as unpatentable over Michaels and Stam. Ans. 4.

Claims 5 and 23 are rejected under 35 U.S.C. § 103(a) as unpatentable over Michaels and Blank. Ans. 4-5.

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<sup>2</sup> The Examiner's Answer does not include page numbering. Seven printed pages of this Answer were provided, and these page numbers correspond sequentially to the pages provided.

## THE ANTICIPATION REJECTION OVER MICHAELS

Regarding illustrative claim 1, the Examiner maps the alignment pins 46 in Michaels to the claimed attachment member and the walls 48 and upper enclosure member 22 to the claimed carrier/baffle. Ans. 3. The Examiner elaborates that Michaels's horizontal axis or the optical axis of lens 32 is the recited desired image sensor optical axis. Ans. 6. The Examiner relies on an additional discussion in Michaels also to teach how the attachment member and carrier/baffle are configured to secure an imager board (mapped to include printed circuit board 24/detector 34) to within the recited angular range of the desired sensor optical axis. Ans. 3.

Appellants argue that the movement of the image sensor relative to the lens will have quite a different result than moving a single detector relative to a lens and that Michaels fails to teach manipulating an associated optical axis. App. Br. 9. Appellants also assert that the alignment pins in Michaels are not an equivalent structure to the recited attachment member in claim 1 and that the pins have no effect on positioning the detector. *Id.*

## ISSUE

Under § 102, has the Examiner erred in rejecting claim 1 by finding that an attachment member and carrier/baffle are configured to secure an imager board within approximately 5 degrees and approximately -5 degrees of a desired image sensor optical axis?

## ANALYSIS

We begin by construing the key disputed limitation of claim 1 which recites “configured to secure an imager board within approximately 5

degrees and approximately -5 degrees of a desired image sensor optical axis.” During examination of a patent application, a claim is given its broadest reasonable construction “in light of the specification as it would be interpreted by one of ordinary skill in the art.” *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Appellants state that “the optical axis of the image sensor” is “the x-axis [which] is a longitudinal axis associated with a controlled vehicle[.]” Spec. ¶ 0036, ll. 1-3. In the Reply Brief, Appellants reinforce this understanding of the optical axis by showing one illustrative embodiment (which appears to be a portion of Figure 5), where the image sensor optical axis is an x-axis that goes through the imager board and would presumably be aligned with a longitudinal axis associated with a vehicle when attached to the vehicle. *See* Reply Br. 5.

As the Examiner states (Ans. 6), this recitation does not recite manipulating the image sensor optical axis as Appellants argue (*see* App. Br. 9; Reply Br. 5-6). Rather, this limitation recites that the attachment member and carrier/baffle are configured to *secure* the imager board within an angular range of a desired image sensor axis. Thus, when construed in light of the disclosure, the recited imager board being configured to be secured “within approximately 5 degrees and approximately -5 degrees of a desired image sensor optical axis” includes an imager board configured to be secured within  $\pm 5$  degrees of a longitudinal axis associated with a vehicle.

Michaels teaches the desired image sensor optical axis recited in claim 1, regardless of how the adjustment screw in Michaels operates and moves the imager board once secured (App. Br. 9). As the Examiner explains (Ans. 6), a horizontal axis associated with a vehicle includes the optical axis of lens 32. This is demonstrated in Figures 1 and 3 of Michaels. Michaels’

Figure 1 is presented below:

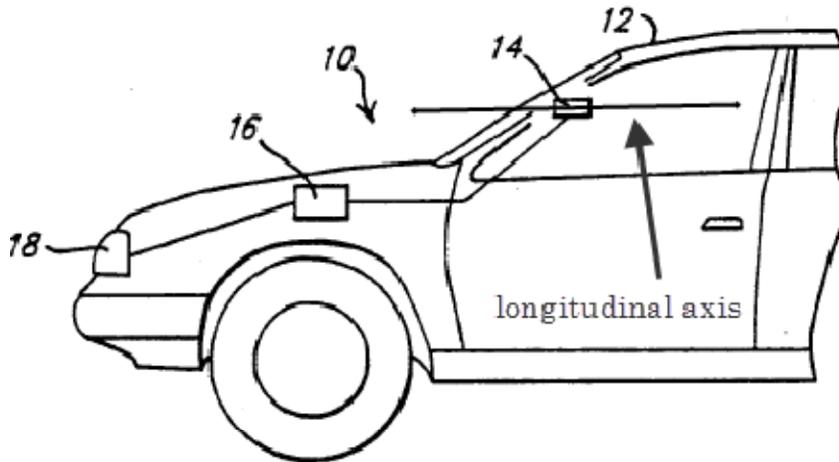


Figure 1 with text added to show a vehicle's longitudinal axis  
As shown, Michaels' sensor module 14 has a longitudinal axis going through module 14. When sensor module 14 is attached to a vehicle, the module also defines a longitudinal axis associated with a vehicle.

Moreover, Michaels' Figure 2 provides more detail of module 14, and Michaels' Figure 3, shown and annotated below, illustrates the module's lower enclosure 22 with lens 32 in more detail in a plan view. Figs. 2-3.

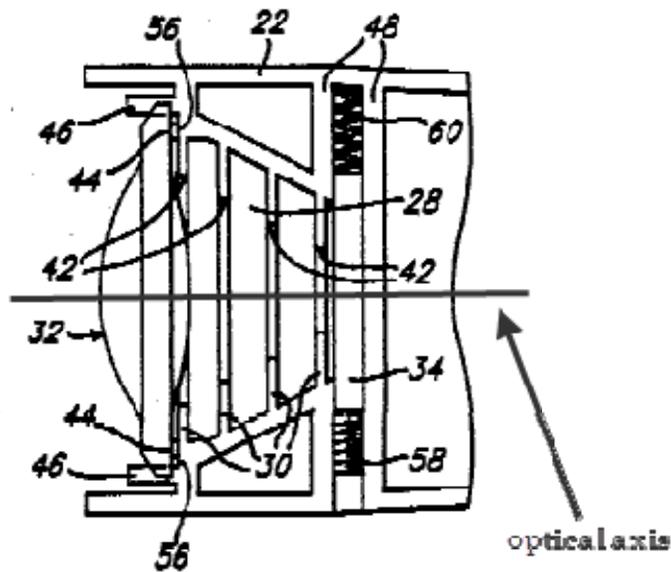


Figure 3 showing Examiner's elected optical axis

In order to detect the lights from other cars immediately in front of the vehicle and dim the vehicle's lights (col. 1, ll. 8-10, 24-29; col. 2, ll. 25-27), Michaels' lens 32 and detector 34 shown in Figure 3 must be directed towards the car's hood (e.g., lie in the longitudinal direction of the car) to operate properly. In this example and when viewing Figures 1-3 collectively, the optical axis of the lens also coincides with a longitudinal axis of Michaels' car. While we agree with Appellants that the ultimate angular alignment of Michaels' device will depend upon alignment of flange 21 to the vehicle (Reply Br. 4), we fail to see how this distinguishes Appellants' claimed invention from Michaels.

Additionally, Michaels' alignment pins 46 and upper enclosure member 22 cooperate to hold lens 32 and detector 34 in a given orientation and alignment relative to each other to ensure proper performance. *See* col. 4, ll. 58-68, col. 5, ll. 15-20; Figs. 3-4. This arrangement in Michaels demonstrates that the optical axis of the lens is also held within a tight tolerance, such that the desired image sensor optical axis (which has been mapped to the optical axis of the lens (Ans. 6)) is maintained approximately within  $\pm 5$  degrees of a longitudinal axis associated with a vehicle. We, therefore, disagree with Appellants that the alignment pins in Michaels cannot be reasonably mapped to the recited attachment member in claim 1 and have no effect on positioning or securing the recited imager board such that the board is secured within the recited angular range of the desired optical axis. *See* App. Br. 9. Thus, Michaels teaches an attachment member (e.g., pins 46) and carrier/baffle (e.g., upper enclosure member 22, support wall 48) that are configured to secure the imager board (e.g., detector 34)

within approximately the recited angular range of the desired image sensor optical axis, as proposed by the Examiner. *See* Ans. 3, 6.

In the Reply Brief, Appellants present various arguments for the first time, including: (1) Michaels' attachment member and the carrier/baffle are one integral piece (Reply Br. 4); (2) there is no structure between mounting flange 21 and detector 34 or the printed circuit board 24 in Michaels configured to secure the imager board relative to a desired, imager sensor optical axis (Reply Br. 4); (3) Michaels does not recognize the problems confronted by the inventors (Reply Br. 4); (4) Michaels does not provide for angular movement since it only has a single sensor as opposed to a image sensor (Reply Br. 6)<sup>3</sup>; and (5) Michaels does not mention an "image sensor optical axis" or vehicle-to-vehicle variations (Reply Br. 6-7). These newly-presented arguments are considered waived. *See Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (informative) ("[The reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner's rejections, but were not."). Likewise, arguments made for the first time at the oral hearing (e.g., claims 3, 4, and 21) are similarly considered waived. *See* Or. H'g Trans. 4, 15, 18.

Nonetheless, even assuming Appellants are correct that the attachment member and carrier are one integral piece, claim 1 fails to recite that the attachment member and carrier/baffle cannot be components of an integral piece. Michaels also discloses other structure, such as the upper

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<sup>3</sup> At oral hearing (Or. H'g Trans. 9-10), Appellants stated that this point was raised earlier in their November 14, 2005, response. The November 14, 2005, response, however, is part of an After-Final Amendment, filed after prosecution had closed.

enclosure member 20<sup>4</sup> (col. 6, ll. 54-65; *see* Fig. 2) and bosses (col. 6, ll. 52-54), that maintain the imager board at the proper position and height. This further illustrates that Michaels teaches numerous attachment members that, along with the carrier, are configured to secure the imager board within an angular range of the desired image sensor optical axis. Additionally, Michaels need not recognize the problems with which Appellants were concerned to anticipate claim 1. Furthermore, identity of terminology between Michaels and claimed limitation is not required. *See In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). Thus, Michaels need not use the phrase, “desired image sensor optical axis” to anticipate claim 1. Moreover, the phrase, “vehicle-to-vehicle variation” is not recited in claim 1 and, thus, need not be found in Michaels.

Claim 1 also does not require a structure between mounting flange 21 and detector 34 or the printed circuit board in Michaels so as to secure the imager board relative to a desired imager sensor optical axis. Finally, Appellants’ arguments that Michaels does not disclose an imager board, as recited, because it is a single sensor (*see* Reply Br. 6) is unavailing. Claim 1 does not recite an image sensor (rather an image sensor optical axis) and does not require the imager board to contain multiple sensors. Appellants’ arguments that a single sensor is tolerant to angular variations and is not an image sensor or board, as recited, (*see id.*) also are not adequately supported. Mere arguments that are unsupported by factual evidence are entitled to little probative value. *Cf. In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997).

Appellants repeat the same arguments for claim 20. *Compare* App.

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<sup>4</sup> Michaels describes the upper housing unit using numeral 22. However, Figure 2 clearly shows the upper housing unit as 20.

Br. 10-11 *with* App. Br. 9. The issues are, therefore, the same.

For the foregoing reasons, Appellants have not persuaded us of error in the rejection of independent claim 1 and claims 3, 4, and 20 not separately argued with particularity.

### THE OBVIOUSNESS REJECTIONS

The Examiner finds that: (1) Michaels, along with what is well-known, teaches all of the limitations in claims 6, 7, 21, and 22 (Ans. 3-4); (2) Michaels and Stam teach all of the limitations of claim 2 (Ans. 4); and (3) Michaels and Blank teach all of the limitations of claims 5 and 23 (Ans. 4-5). For each of these rejections, Appellants refer to the previous arguments of independent claims 1 and 20. App. Br. 11-12. The issues before us, then, are the same as those in connection with claim 1, and we refer Appellants to our previous discussion. Based on this record, Appellants have not persuaded us of error in the rejections of claims 2, 5-7, and 21-23.

### CONCLUSION

The Examiner did not err in rejecting claims 1-7 and 20-23 under § 102 or § 103.

### DECISION

The Examiner's decision rejecting claims 1-7 and 20-23 is affirmed.

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Application 10/783,273

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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