



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/665,065	03/23/2015	Jamie A. Mleczko	MAG04 P-2483-423824	2733
153508	7590	06/08/2020	EXAMINER	
HONIGMAN LLP/MAGNA 650 TRADE CENTRE WAY SUITE 200 KALAMAZOO, MI 49002-0402			PICON-FELICIANO, ANA J	
			ART UNIT	PAPER NUMBER
			2482	
			NOTIFICATION DATE	DELIVERY MODE
			06/08/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

asytsma@honigman.com
patent@honigman.com
tflory@honigman.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMIE A. MLECZKO, JONATHAN D. CONGER, STEVEN V. BYRNE.¹

Appeal 2019-002387
Application 14/665,065
Technology Center 2400

Before ROBERT E. NAPPI, LARRY J. HUME, and
CATHERINE SHIANG, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1 through 8, and 10 through 20, the rejection of claim 9 has been withdrawn.² We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Magna Electronics. Appeal Br. 2.

²The Examiner withdrew the rejection of claim 9 on page 18 of the Examiner’s Answer.

INVENTION

The invention is directed to a camera assembly for a vehicle vision system. Abstract. The camera is contained in a housing that has two portions, the camera circuitry is in the first portion, and a connector is in the second portion of the housing. *Id.* The connector has electrical connector element, which is flexible on one end and engages the camera circuitry during the mating of the two housing portions. *Id.* Claim 1 is illustrative of the invention and is reproduced below:

1. A camera assembly for a vehicle vision system, said camera assembly comprising:
 - a housing comprising a first housing portion mated with a second housing portion;
 - wherein said first housing portion comprises a lens holder;
 - wherein said second housing portion comprises a connector portion;
 - wherein said connector portion is configured for connecting to vehicle wiring when said camera assembly is installed at a vehicle;
 - a circuit element disposed within said housing;
 - a plurality of electrical connector elements disposed at said connector portion of said second housing portion, wherein each of said electrical connector elements comprises (i) a first end portion that is configured for electrically connecting to circuitry of said circuit element and (ii) a second end portion that is configured for electrically connecting to the vehicle wiring;
 - wherein said first end portions of said electrical connector elements comprise flexible elements; and
 - wherein, during mating of said first housing portion to said second housing portion, said first end portions flex as said first end portions engage said circuitry and make electrical connection with said circuitry.

REJECTIONS AT ISSUE³

The Examiner has rejected claims 1, 2, 7, 8, and 10 through 15 under 35 U.S.C. § 102(a)(1) as being anticipated by Bingle (US 2006/0171704 A1, published Aug. 3, 2006). Answer 6–11.

The Examiner has rejected claims 3 through 6, and 16 through 20 under 35 U.S.C. § 103(a) as being unpatentable over Bingle and De Paschoal (US 2010/0176717 A1, published Jun. 26, 2014). Answer 12–22.

ANALYSIS

We have reviewed Appellant’s arguments in the Briefs, the Examiner’s rejections, and the Examiner’s response to Appellant’s arguments. Appellant’s arguments have persuaded us of error in the Examiner’s rejections of claims 1, 2, 7, 8, and 10 through 15 under 35 U.S.C. § 102(a)(1), and of claims 3 through 6, and 16 through 20 under 35 U.S.C. § 103 as being unpatentable over Bingle and De Paschoal. However, we enter a new rejection under 35 U.S.C. § 103 of claims 1 through 8 and 10 through 20 under 35 U.S.C. § 103 based upon Bingle and newly cited Grovender (U.S. 4,340,266, issued Jul. 20, 1982).

Rejection of claims 1, 2, 7, 8 and 10 through 15

Appellant argues the Examiner’s anticipation rejection is in error, as Bingle does not teach a first end of each of the electrical connector elements is flexible as recited in claim 1. Appeal Br. 16–18. Appellant asserts that

³ Throughout this Opinion, we refer to the Appeal Brief, filed August 7, 2018 (“Appeal Br.”), the Reply Brief, Filed January 29, 2019 (Reply Br.); the Examiner’s Answer, mailed November 30, 2018 (“Answer”), and the Final Office Action, mailed February 7, 2018 (“Final Act.”).

while Bingle teaches the connectors may be in a bent shape, that does not demonstrate that they are flexible. Appeal Br. 18–20. Further, Appellant argues that even if Bingle’s angled terminals are flexible, Bingle does not teach that the ends flex as they engage the circuitry to make an electrical connection as claimed. Appeal Br. 21–22.

The Examiner, in the rejection, cites to Figures 3 through 11 and paragraphs 81 through 83 of Bingle to teach the disputed features of claim 1. Final Act. 7–8. In response to Appellant’s arguments the Examiner states:

Further on, the term "*flexible*" by definition include the means of "*capable of bending easily without breaking*", "*able to be easily modified to respond to altered circumstances or conditions; and ready and able to change so as to adapt to different circumstances*". Further on, *flexible* is a synonym of *adaptable, adjustable, variable, versatile, open-ended, open, accommodating and amenable*.

Moreover, it is understood that if these connectors can be angled or bent at some degree angle, they may be formed of a material that is flexible not brittle. Connectors in camera systems are configured to have some degree of flexibility in order to avoid breakage due to vibrations or other forces, even more when the imaging or camera system is operational in a vehicle. In this case, the claim requires electrical connector elements having flexible elements that flex as the respective end portions engage circuitry. Accordingly, it is understood that Bingle meets with the contended limitation in that wire will have some degree of flexibility and not be brittle.

Answer 22.

The Examiner has not responded to Appellant’s arguments concerning Bingle not teaching the contacts flex as they engage the circuitry to make an electrical connection.

Appellant’s arguments have persuaded us of error in the anticipation rejection of claim 1. We consider the Examiner’s interpretation of the term

flexible to be reasonable. However, we do not find that the Examiner has shown that Bingle discloses the claim 1 feature of “said first end portions flex as said first end portions engage said circuitry and make electrical connection with said circuitry.” Bingle teaches that the electrical connectors, items 14 in Fig 7, are soldered to the circuit board (see items 14d and 26d Fig. 7 and the discussion in paragraph 90). We however consider this an obvious modification to Bingle as evidenced by a newly cited patent to Grovender.

We enter a new grounds of rejection against independent claim 1 and dependent claims 2, 7, 8 and 10 through 15, by applying the uncontested findings concerning Bingle from the anticipation rejection, combined with Grovender’s teachings of a connector, in which the connector elements have flexible ends that engage and make an electrical connection with a circuit board as it is assembled. Specifically, Grovender teaches a connector for an integrated circuit. (See col. 1, 7-10, Fig’s 1–3). The connector has contact elements that are resilient metal and act as a spring and flex to make contact with the circuit on carrier item 11. *See* col. 4, ll. 3–10, 21–25, col. 5, ll. 55–60. Grovender teaches that while soldering creates a good electrical contact it has the disadvantage of making it difficult to separate the integrated circuit from the contacts and the act of soldering may overheat the integrated circuit on item 11. *See* col. 1, ll. 35–51. Thus, we consider the skilled artisan would recognize that using the flexible spring contacts of Grovender, in the camera assembly of Bingle would provide the requisite electrical contact between the camera circuitry without having to make solder connections to circuitry.

Rejection of claims 3 through 6, and 16 through 20

Appellant argues the Examiner's obviousness rejection based upon Bingle and De Paschoal is in error for the same reasons as discussed above with respect to claim 1. Answer 23–29. Appellant argues that De Paschoal does not teach the connector element have compressible spring elements as recited in dependent claim 3, and that the Examiner has not explained how the teachings of De Paschoal, would be incorporated into Bingle. Appeal Br. 23–26. Further, Appellant asserts that the Examiner has not provided the requisite rationale to modify the teachings of Bingle to include flexible connector elements as claimed. Appeal Br. 26–27. With respect to independent claims 16, and 19, and dependent claims 4 through 6, 17 through 18, and 20 Appellant argues the Examiner's rejection is in error for similar reasons. Appeal Br. 27–29.

The Examiner, in the rejection, cites to Bingle to teach the limitations of claim 1, and cites to De Paschoal for the claim 3 limitation directed to the contacts having spring elements, which engage the circuitry. Final Act 13 (citing De Paschoal Figs 21. and para. 74–87). In response to Appellant's arguments, the Examiner states that De Paschoal teaches a locking hardware and circuitry, which makes use of flexible rods (items 206 and 208) and optionally use of coil springs to increase flexibility of the rods, and that the motion of these rods is used to open or close an electrical circuit. Answer 23. The Examiner concludes "the incorporation of De Paschoal teachings of spring or coil spring elements can provide connector elements into a camera module/assembly that can be capable to compress expand or move from one position or state to another." *Id.*

Appellant's arguments have persuaded us of error in the Examiner's obviousness rejection. As discussed above we do not find that Bingle teaches the claim 1 limitation of the end portions flex as said first end portions engage said circuitry and make electrical connection with said circuitry. Independent claims 16 and 19 includes similar limitations. Further, we concur with the Appellant that the Examiner has not identified how the teachings of De Paschoal's key operated switch, using flexible rods and springs is incorporated into the electrical connector of Bingle to teach the disputed limitation. Accordingly, we do not sustain the Examiner's obviousness rejection of claim 3 through 6, and 16 through 20.

However, similar to claim 1 above, we enter a new ground of rejection against independent claim 16, 19 and dependent claims 3 through 5, and 17, 18 and 20 as obvious over Bingle, and Grovender. We apply the Examiner's uncontested findings concerning Bingle from the anticipation and obviousness rejections with Grovender's teachings of a connector, which has flexible ends that engage and make an electrical connection with a circuit board as it is assembled. As discussed above with respect to the new rejection of claim 1, we conclude the skilled artisan would recognize that using the flexible spring contacts of Grovender, would provide the requisite electrical contact between the camera circuitry without having to make solder connections to circuitry.

With respect to claim 6, which includes the limitation that the spring elements are coil springs. Grovender, teaches the spring elements, but does not teach that coil spring elements are used. We consider a coil spring to be a well-known type of spring element and take official notice that coil springs are commonly used in electronics to provide contact pressure, e.g. a battery

compartment for a flashlight or other device. We also note that De Paschoal teaches using coil springs to provide contact pressure. See para 77. Thus, we now reject claim 6 as obvious over Bingle, Grovender, using a coil spring to provide the spring pressure in the connector. We consider this to merely be the substitution of known elements (one shape spring for another) to perform their known function, provide spring pressure.

CONCLUSION

We reverse the Examiner’s decision rejecting claims 1 through 8 and 10 through 20, and enter a new ground of rejection of claims 1–8 and 10–20 under 35 U.S.C. § 103.

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed	New Ground
	103	Bingle, Grovender			1–8, 10–20
1, 2, 7, 8 10–15	102(a)(1)	Bingle		1, 2, 7, 8 10–15	
3–6, 16–20	103	Bingle and De Paschoal		3–6, 16–20	
Overall Outcome				1–8, 10–20	1–8, 10–20

This Decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). This section provides that “[a] new ground of rejection . . . shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the Appellant, **WITHIN TWO MONTHS FROM THE DATE OF THE DECISION**, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

Appeal 2019-002387
Application 14/665,065

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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). *See* 37 C.F.R. § 41.50(f).

REVERSED; 37 C.F.R. § 41.50(b)