

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte ANTHONY ITALO PROVITOLA

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Appeal No. 2002-0030  
Application No. 09/314,267

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ON BRIEF

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Before FRANKFORT, NASE, and BAHR, Administrative Patent Judges.  
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 3, 5, 7 to 13, 15, 17, 18 and 20. Claims 4, 6, 14, 16 and 19 have been objected to as depending from a non-allowed claim. The appellant appeals only claims 1, 2, 5, 7 to 12, 15, 17 and 20. The appellant does not appeal from the final rejection of claims 3, 13 and 18.

We REVERSE and REMAND.

BACKGROUND

The appellant's invention relates to a toroidal wheel and includes the mounting and driving thereof (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Bobek	1,416,253	May 16, 1922
Shih	5,778,998	July 14, 1998

Claim 7 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the appellant regards as the invention.

Claims 1, 2, 5, 8, 11, 12, 17 and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bobek.<sup>1</sup>

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<sup>1</sup> While claim 20 was not included in the statement of the rejection (final rejection, p. 3), claim 20 was specifically discussed in the body of the rejection (final rejection, p. 4).

Claims 7, 9 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bobek in view of Shih.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the final rejection (Paper No. 7, mailed November 7, 2000) and the answer (Paper No. 16, mailed May 22, 2001) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 15, filed March 22, 2001) and reply brief (Paper No. 17, filed May 25, 2001) for the appellant's arguments thereagainst.

#### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims,<sup>2</sup> to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

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<sup>2</sup> We note that claims 2, 12 and 17 appear to recite identical subject matter. We direct the appellant's and the examiner's attention to 37 CFR § 1.75(b) and MPEP § 706.03(k) which discuss the handling of duplicate claims.

### **The indefiniteness rejection**

We will not sustain the rejection of claim 7 under 35 U.S.C. § 112, second paragraph.

Claims are considered to be definite, as required by the second paragraph of 35 U.S.C. § 112, when they define the metes and bounds of a claimed invention with a reasonable degree of precision and particularity. See In re Venezia, 530 F.2d 956, 958, 189 USPQ 149, 151 (CCPA 1976).

In this rejection, the examiner stated (final rejection, p. 2) that the phrase "mount/drive" is indefinite. Specifically, the examiner asserted that he is uncertain if the phrase is a combination of a mount and a drive or a choice of a mount and a drive.

We agree with the appellant (see brief, pp. 4-5) that the phrase "mount/drive" as used in claim 7 is definite. The specification (p. 5) clearly defines the phrase "mount/drive" to mean either that the toroidal wheel is (1) mounted for and driven in rotation, or (2) mounted for rotation but is not driven. Thus, the metes and bounds of the phrase "mount/drive" can be ascertained with a reasonable degree of precision and particularity. Moreover, even under the examiner's asserted alternative meaning the

phrase "mount/drive" would be definite since the metes and bounds thereof can be ascertained.<sup>3</sup>

### **The prior art rejections**

In reviewing the claimed subject matter and the prior art rejections before us in this appeal, it is apparent to us that the examiner has not properly considered the means plus function limitation recited in each of the independent claims on appeal. For reasons stated infra in our remand, it is not appropriate to review, at this time, the rejection of claims 1, 2, 5, 8, 11, 12, 17 and 20 under 35 U.S.C. § 102(b) and the rejection of claims 7, 9 and 10 under 35 U.S.C. § 103. Accordingly, our decision on the merits of these two prior art rejections will be held in abeyance pending the outcome of the remand.

### REMAND

Claims 1 to 20 all include a limitation written in "means plus function format" (i.e., means for connecting the torsion elements so that the torsional load on one of the torsion elements is transmitted to one or more of the other of the torsion elements to which said one of the torsion elements is connected).

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<sup>3</sup> In that regard, the mere breadth of a claim does not in and of itself make a claim indefinite. See In re Miller, 441 F.2d 689, 693, 169 USPQ 597, 600 (CCPA 1971).

Since a limitation at issue in this appeal is in "means plus function" format as permitted by 35 U.S.C. § 112, ¶ 6, that limitation must be interpreted to cover the structure disclosed in the specification and the equivalents thereof.<sup>4</sup> In construing a "means plus function" limitation a number of factors must be considered, including the language of the claim, the specification, and the prosecution history. Once such factors are weighed, the scope of the "means plus function" limitation can be determined. See United States v. Teletronics, Inc., 857 F.2d 778, 782, 8 USPQ2d 1217, 1220 (Fed. Cir. 1988), cert. denied, 490 U.S. 1046 (1989).

In order to meet a "means-plus-function" limitation, the prior art must (1) perform the identical function recited in the means limitation and (2) perform that function using the structure disclosed in the specification or an equivalent structure. Cf. Carroll Touch Inc. v. Electro Mechanical Sys. Inc., 15 F.3d 1573, 1578, 27 USPQ2d 1836, 1840 (Fed. Cir. 1994); Valmont Indus. Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1042, 25 USPQ2d 1451, 1454 (Fed. Cir. 1993); Johnston v. IVAC Corp., 885 F.2d 1574, 1580, 12 USPQ2d 1382, 1386 (Fed. Cir. 1989). Accordingly, in ascertaining that a "means plus

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<sup>4</sup> As explained in In re Donaldson, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848-49 (Fed. Cir. 1994), the USPTO is not exempt from following the statutory mandate of 35 U.S.C. § 112, paragraph 6, which reads:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

function" limitation is met by the prior art, an examiner must (1) determine that the prior art performs the identical function recited in the means limitation; (2) identify the structure described in the patent specification that corresponds to the claimed function;<sup>5</sup> (3) identify the structure in the prior art that performs the claimed function; (4) determine if the structure in the prior art that performs the claimed function is the same as any structure described in the patent specification that corresponds to the claimed function; and if not (5) determine if the structure in the prior art that performs the claimed function is equivalent to any structure described in the patent specification that corresponds to the claimed function.

Manual of Patent Examining Procedure (MPEP) § 2183 (Eighth Edition, Aug. 2001) now provides that if the examiner finds that a prior art element (A) performs the function specified in the claim, (B) is not excluded by any explicit definition provided in the specification for an equivalent, and (C) is an equivalent of the means plus function limitation, the examiner should provide an explanation and rationale in the Office action as to why the prior art element is an equivalent.<sup>6</sup>

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<sup>5</sup> Structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim. Medtronic, Inc. v. Adv. Cardiovascular Sys., Inc., 248 F.3d 1303, 1311, 58 USPQ2d 1607, 1613 (Fed. Cir. 2001).

<sup>6</sup> The four tests set forth in MPEP § 2183 for determining whether or not a prior art element is an equivalent to the corresponding element disclosed in the specification are (A) the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification; (B) a person of  
(continued...)

In this case, the examiner has not (i) identified the structure described in the patent specification that corresponds to the claimed function; (ii) determined if the structure in the prior art that performs the claimed function is the same as any structure described in the patent specification that corresponds to the claimed function; and (iii) determined if the structure in the prior art that performs the claimed function is equivalent to any structure described in the patent specification that corresponds to the claimed function.

We remand this application to the examiner for the following further action.

- (1) Identify the structure or structures described in the patent specification that corresponds to the claimed function of the "means for connecting the torsion elements so that the torsional load on one of the torsion elements is transmitted to one or more of the other of the torsion elements to which said one of the torsion elements is connected;"
- (2) Determine if the structure in the prior art that performs the claimed function is the same as any structure described in the patent specification that corresponds to the claimed function of the "means for connecting the torsion elements so that the torsional

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<sup>6</sup>(...continued)

ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification; (C) there are insubstantial differences between the prior art element and the corresponding element disclosed in the specification; and (D) the prior art element is a structural equivalent of the corresponding element disclosed in the specification.

load on one of the torsion elements is transmitted to one or more of the other of the torsion elements to which said one of the torsion elements is connected;" and if not (3) Determine if the structure in the prior art that performs the claimed function is equivalent to any structure described in the patent specification that corresponds to the claimed function of the "means for connecting the torsion elements so that the torsional load on one of the torsion elements is transmitted to one or more of the other of the torsion elements to which said one of the torsion elements is connected." In making this determination, the examiner must provide an explanation and rationale as to why the prior art element is or is not an equivalent.<sup>7</sup>

In making determination (1), the examiner should ascertain the impact of the Federal Circuit decision in Atmel Corporation v. Information Storage Devices, Inc., 198 F.3d 1374, 53 USPQ2d 1225 (Fed. Cir. 1999) which under the facts in that case held that the corresponding structure must be actually set forth in the instant specification (i.e., not an open-ended reference to an extrinsic work mentioned in the specification). Atmel, 198 F.3d at 1382, 53 USPQ2d at 1230 .

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<sup>7</sup> In applying either test (B) or (D) set forth in MPEP § 2183 for determining whether or not a prior art element is an equivalent to the corresponding element disclosed in the specification (see footnote 6 above) the examiner must provide evidence that either (1) a person of ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification, or (2) the prior art element is a structural equivalent of the corresponding element disclosed in the specification.

In addition, claims drafted in means-plus-function format are subject to the definiteness requirement of 35 U.S.C. § 112, second paragraph:

[I]f one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

In re Donaldson, 16 F.3d at 1195, 29 USPQ2d at 1850; see also In re Dossel, 115 F.3d 942, 946-47, 42 USPQ2d 1881, 1884-85 (Fed. Cir. 1997). Thus, in order for a claim to meet the particularity requirement of the second paragraph of 35 U.S.C. § 112, the corresponding structure(s) of a means-plus-function limitation must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation. Thus, if the examiner were to determine that the appellant's disclosure fails to adequately disclose what structure corresponds to the claimed "means for connecting the torsion elements so that the torsional load on one of the torsion elements is transmitted to one or more of the other of the torsion elements to which said one of the torsion elements is connected," then the examiner should determine if a rejection of claims 1 to 20 under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the appellant regards as the invention is appropriate.

CONCLUSION

To summarize, the decision of the examiner to reject claim 7 under 35 U.S.C. § 112, second paragraph, is reversed; and the decision of the examiner to reject claims 1, 2, 5, 8, 11, 12, 17 and 20 under 35 U.S.C. § 102(b) and the decision of the examiner to reject claims 7, 9 and 10 under 35 U.S.C. § 103 is being held in abeyance pending the outcome of the above-noted remand.

This application, by virtue of its "special" status, requires immediate action, see MPEP § 708.01.

REVERSED; REMANDED

CHARLES E. FRANKFORT	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
JEFFREY V. NASE	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
JENNIFER D. BAHR	)	
Administrative Patent Judge	)	

FRANKFORT, Administrative Patent Judge, additional views

My reading of Atmel Corporation v. Information Storage Devices, Inc., 198 F.3d 1374, 53 USPQ2d 1225 (Fed. Cir. 1999) reveals no indication that the Federal Circuit intended to place any restriction on the use of a proper incorporation by reference to supplement or complete appellant's disclosure concerning a "means plus function" limitation. As set forth in MPEP § 608.01(p), the Commissioner/Director of the U.S. Patent and Trademark Office has considerable discretion under the authority granted him/her to determine what may or may not be incorporated by reference in a patent application and to thereby insure that applications which issue as U.S. patents provide the public with a complete patent disclosure which minimizes the public's burden to search for and obtain copies of documents incorporated by reference which may not be readily available. The Commissioner/Director has chosen to exercise that discretion with regard to "essential material"<sup>8</sup> by limiting any incorporation by reference to 1) a U.S. patent, 2) a U.S. patent application publication, or 3) a pending U.S. patent application.

Since appellant has, on page 6 of the specification, made reference to his co-pending Application No. 09/276,666 for support regarding the structure

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<sup>8</sup> "Essential material" is defined in MPEP § 608.01 (p) as being that which is necessary to (1) describe the claimed invention, (2) provide an enabling disclosure of the claimed invention, or (3) describe the best mode (35 U.S.C. § 112).

corresponding to the "means for connecting the torsion elements..." set forth in claims 1, 11 and 17 of the present application, it appears to me that he has, at least nominally, complied with the requirements for a proper incorporation by reference under U.S. PTO guidelines. As further spelled out in MPEP § 2163.07(b), the above information incorporated by reference is as much a part of the application as filed as if the text was repeated in the application, and should be treated as part of the text of the application as filed. Support for this proposition is long standing, as for example in In re Lund, 376 F.2d 982, 989, 153 USPQ 625, 631 (CCPA 1967), wherein the Court noted that the purpose of "incorporation by reference" is to make one document become a part of another document by referring to the former in the latter in such a manner that it is apparent that the cited document is part of the referencing document as if it were fully set out therein. Indeed, in the Lund decision (376 F.2d at 989, 153 USPQ at 631) the Court of Customs and Patent Appeals expressly recognized that subject to compliance with 35 U.S.C. §§ 112 and 132, the disclosure in a patent application may be deliberately supplemented or completed by reference to disclosure set forth in other patents, to disclosure in earlier or concurrently filed copending applications, or, in general, to disclosure which is available to the public.

In conclusion, it is my view that the Federal Circuit's decision in Atmel does not set forth a per se rule that even a proper incorporation by reference of "essential

material" is inadequate to support a "means plus function" limitation and to comply with the requirements of 35 U.S.C. § 112, second and sixth paragraphs. Like the majority in Atmel, 198 F.3d at 1378-79, 53 USPQ2d at 1228, it is my opinion that the "one skilled in the art" mode of analysis applies when determining whether a 35 U.S.C. § 112, ¶ 6, "means plus function" limitation is sufficiently definite under paragraph 2 of 35 U.S.C. § 112, and that it is "the disclosure in the specification itself, not the technical form of the disclosure that counts."

I leave it to the examiner to determine if the subject matter incorporated by reference into the specification adequately supports the "means for connecting the torsion elements..." limitation in the claims of the present application and fully complies with 35 U.S.C. § 112, first and second paragraphs. In addition, as was indicated above, the examiner must perform a proper analysis of the "means plus function" limitation vis-a-vis the prior art before we can make any reasonable determination on the propriety of the prior art rejections currently on appeal.

CHARLES E. FRANKFORT  
Administrative Patent Judge

) BOARD OF PATENT  
) APPEALS  
) AND  
) INTERFERENCES

BAHR, Administrative Patent Judge, additional views

While I join with my colleagues in, *inter alia*, remanding this application to the examiner to identify the structure(s) described in the specification that correspond(s) to the means plus function limitation recited in the claims, it is my opinion that the appellant's specification fails to adequately disclose what structure corresponds to the claimed "means for connecting the torsion elements so that the torsional load on one of the torsion elements is transmitted to one or more of the other of the torsion elements to which said one of the torsion elements is connected." In fact, the appellant points out (brief, p. 11) that the structure corresponding to this means is set forth not in this application but in another application (i.e., Application No. 09/276,666 referenced on page 6 of the present application). However, for the reasons which follow, I conclude that, according to Atmel Corporation v. Information Storage Devices, Inc., 198 F.3d 1374, 53 USPQ2d 1225 (Fed. Cir. 1999), that description in the other application is not available to comply with the specific requirement of paragraph six of 35 U.S.C. § 112 that the corresponding structure be described in the specification. Since no corresponding structure is set forth in the specification, claims 1 to 20 fail to particularly point out and distinctly claim the subject matter which the appellant regards as the invention.

The district court in the Atmel case found that an article referenced in the patentee's specification was improperly incorporated by reference under the provisions set forth in MPEP § 608.01(p) and held that, as such, the disclosure in that article could not be relied upon to comply with the requirement of paragraph six of 35 U.S.C. § 112 that the structure corresponding to a means plus function limitation be disclosed in the specification. The district court rejected an argument that it should determine whether the claim was indefinite based on the way the disclosure would be understood by one skilled in the art, not on the "technical form" of the specification. Id., 198 F.3d at 1377, 53 USPQ2d at 1227.

The Federal Circuit in Atmel determined that the district court erred in its analysis and should have determined whether sufficient structure was disclosed in the specification based on the understanding of one skilled in the art. Id., 198 F.3d at 1378, 53 USPQ2d at 1227. However, the Federal Circuit also cautioned that "consideration of the understanding of one skilled in the art in no way relieves the patentee of adequately disclosing sufficient structure in the specification." Id., 198 F.3d at 1380, 53 USPQ2d at 1229. The Federal Circuit disagreed with the district court that an inquiry under paragraph two of 35 U.S.C. § 112 turns on whether a patentee has "incorporated by reference" material into the specification relating to structure and indicated that the proper inquiry is "first whether structure *is* described in [the]

specification, and, if so, whether one skilled in the art would identify the structure from that description." Id., 198 F.3d at 1381, 53 USPQ2d at 1230. Contrasting paragraph six with the enablement requirement of paragraph one of 35 U.S.C. § 112, the Federal Circuit pointed out that the provision in paragraph six "represents a *quid pro quo* by permitting inventors to use a generic means expression for a claim limitation *provided that* the specification indicates what structure(s) constitute(s) the means." Id.

As stated in Atmel,

[f]ulfillment of the § 112, ¶ 6 tradeoff cannot be satisfied when there is a total omission of structure. There must be structure in the specification. This conclusion is not inconsistent with the fact that the knowledge of one skilled in the particular art may be used to understand what structure(s) the specification discloses, or that even a dictionary or other documentary source may be resorted to for such assistance, because such resources may only be employed in relation to structure that is disclosed in the specification. Paragraph 6 does not contemplate the kind of open-ended reference to extrinsic works that ¶ 1, the enablement provision, does.

Id., 198 F.3d at 1382, 53 USPQ2d at 1230.

I read this discussion in Atmel as an indication that the disclosure of an extrinsic work, even if incorporated in the specification by reference in accordance with the guidelines set forth in MPEP § 608.01(p), cannot be relied upon to fulfill the "§ 112, ¶ 6 tradeoff" that the specification indicate what structure(s) constitute(s) the claimed

means.<sup>9</sup> Unlike the situation in Atmel, wherein the inclusion of the title of the referenced article *may* have been sufficient alone to indicate to one skilled in the art the precise structure of the means recited in the claim<sup>10</sup>, the appellant's specification contains no language which would be sufficient, alone, to indicate to one skilled in the art the precise structure of the "means for connecting the torsion elements so that the torsional load on one of the torsion elements is transmitted to one or more of the other of the torsion elements to which said one of the torsion elements is connected" recited in the claims.

JENNIFER D. BAHR  
Administrative Patent Judge

) BOARD OF PATENT  
) APPEALS  
) AND  
) INTERFERENCES

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<sup>9</sup> I see nothing in the Atmel opinion which indicates that the determination that the Dickson article referred to in the specification at issue therein "may not take the place of structure that does not appear in the specification" (Id., 198 F.3d at 1382, 53 USPQ2d at 1231) turned on whether the article was incorporated in compliance with the standards of the MPEP.

<sup>10</sup> The Federal Circuit remanded the Atmel case back to the district court for consideration of this issue. Id., 198 F.3d at 1382, 53 USPQ2d at 1231.

Appeal No. 2002-0030  
Application No. 09/314,267

Page 19

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