The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HELMUT JERG, MICHAEL ROSENBAUER, and BERND SCHESSL

Appeal No. 2007-0358
Application 10/873,477
Technology Center 1700

Decided: March 12, 2007

Before GRON, DELMENDO, and MEDLEY, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

Statement of the Case

Applicants have appealed from a final rejection of claims 1-11 of United States Patent Application 10/873,477 under 35 U.S.C. § 134 (2006).[1] We have jurisdiction under 35 U.S.C. § 6(b).

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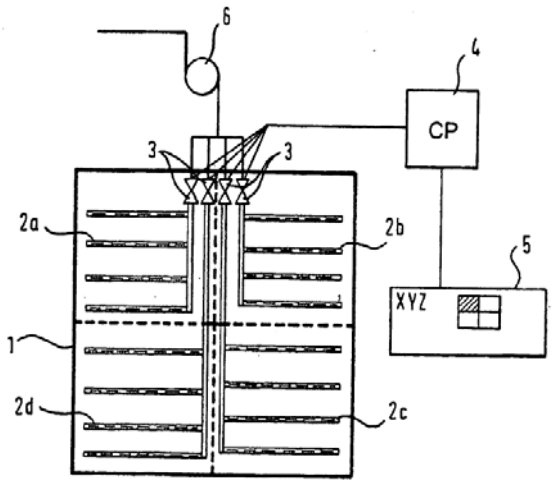
[1] Applicants and the examiner submit that claims 5 and 10 also stand finally rejected but are "not appealed." (Amended Appeal Brief, filed June 5, 2006, at 5; Examiner's Answer mailed July 20, 2006 at 2.) We note, however, that "[a]n

We *AFFIRM* the examiner's final rejection of all pending claims.

The specification describes "a device...for washing items in a dishwasher which...enable[s] items to be washed that are stacked in a dish rack with varying dirtiness or soiling to be cleaned optimally according to the degree of dirtiness or soiling." (Specification at 2, lines 14-20.) A spraying device having "specific areas" is integrated with at least one dish rack and a "control mechanism is associated with the spraying device for controlling the specific areas of the spraying device during washing." (*Id*. at 2, line 22, to 3, line 3.) Applicants' Fig. 1 is reproduced below:



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appeal, when taken, must be taken from the rejection of *all* claims under rejection which the applicant or patent owner proposes to contest" (Emphasis added). *See* 37 CFR § 41.31(c). Accordingly, these claims are also subject to our decision on appeal. Because Applicants do not contest the rejection of claims 5 and 10, we *pro forma* affirm the rejection as to these claims.

Fig. 1 is said to provide a "diagrammatic, plan view of an embodiment of a dish rack and spraying device as well as, inter alia, a block diagram of a control mechanism and operating panel...according to the invention." (Specification at 5, lines 22-26.) In Fig. 1, reference numeral **1** denotes a dish rack, **2a-2d** each denotes a spraying device, **3** denotes a blocking device, **4** denotes a control mechanism, **5** denotes an operating panel, and **6** denotes a circulating pump. (Specification 6, line 3 to 7, line 14.)

The examiner finally rejected the claims as follows: (i) claims 1-4 and 6-9 under 35 U.S.C. § 102(b); and (ii) claims 5, 10, and 11 under 35 U.S.C. § 103(a). (Examiner's Answer at 3-5; Final Office Action mailed September 8, 2005 at 3-5.) Claims 1, 10, and 11 are representative of the appealed subject matter and are reproduced as follows:

> 1. A device for cleaning items to be washed in a dishwasher, the device comprising:
> at least one dish rack;
> a spraying device having specific areas, said spraying device being integrated with said at least one dish rack; and
> a control mechanism associated with said spraying device for controlling said specific areas of said spraying device during washing.
>
> 10. The device according to claim 1, which further comprises a sensor for sensing a condition in the dishwasher and means for at least one of indicating a condition in the dishwasher sensed by said sensor and communicating the sensed condition in the dishwasher to said control mechanism for subsequent controlling of said spraying device by said control mechanism in response to the sensed condition in the dishwasher.

> 11. The device according to claim 10, wherein said control mechanism is operable to control said spraying device to provide a more intensive spraying of a respective region in response to the sensing by said sensor of a condition in the dishwasher indicating that items in the respective region have a soil condition requiring more intensive spraying.

The examiner relies on the following prior art references as evidence of unpatentability.

Cooper et al. (Cooper)	US 5,611,867	Mar. 18, 1997
Benkert (DE '670)[2]	DE 1,403,670	Oct. 24, 1968

Appellants acknowledge that DE '670 "discloses a dish rack 2-6 and a plurality of jets 7-10 with each of the jets having a respective magnetic valve 21-24 associated therewith." (Amended Appeal Brief at 11.) They contend, however, that "[i]t is not at all clear how [DE '670] provides any motivation to one of ordinary skill in the art to modify its jet arrangement to configure the device for cleaning items to be washed in a dishwasher recited in claim 1 of the present application." (*Id*.) With respect to the rejection of claim 11 over the combined teachings of DE '670 and Cooper, Appellants contend that "Cooper et al provides no hint of the desirability of controlling a spraying device to provide a more

[2] Like the examiner, we rely on the PTO English language translation of DE '670 in the record.

intensive spraying of a respective region in response to the sensing by a sensor of a condition in the dishwasher indicating that items in the respective region have a soil condition requiring a more intensive spraying, such as is recited in claim 11 of the present application." (*Id*. at 13.)

The examiner, on the other hand, explains that DE '670 describes a device with at least one dish rack (2-5), spraying devices (7-10) covering specific areas of, and integrated with, the dish rack, and a control mechanism for individually controlling each of the spraying devices during a washing operation, whereby individually operating solenoids (valves) 21-24 control the intensity of the spray through spray devices 7-10. (Examiner's Answer at 5.) The examiner observes that appealed claim 1 is "quite broad in scope" and therefore reads on the device described in DE '470. (Examiner's Answer at 3-4 and 6.) As to claim 11, the examiner reasons:

> Firstly, DE '670 further discloses the desirability of controlling the intensity of the spray devices based on the soiling degree of the dishes (see, for instance, page 3, lines 3-5 & 11-16 and claim 3 of the Official translation). Secondly, COOPER teaches that it is known in the washing machine art to control/select a wash cycle based on a condition in a dishwasher, inter alia a solid condition (turbidity) (see col. 3, lines 23-32). The Examiner notes that the entire purpose for conventionally sensing turbidity in a dishwasher is to control the dishwasher based on the sensed turbidity, such being well understood by one having ordinary skill in the art. Thus, it would have been obvious for a person of ordinary skill in the art at the time the invention was made to combine the well known concept in COOPER of using turbidity sensor and controlling a wash cycle based on the

> soil condition sensed in a dishwasher, with the dishwasher of DE '670 which controls spray nozzle intensity based on the wash cycle desired (i.e. "if very dirty dishes are to be cleaned...the intensity of the spraying must be considerably increased", page 3, lines 3-5 of the Official translation) in order to control spray intensity in a dishwasher based on the sensed turbidity to provide a more efficient cleaning effect in a dishwasher.

For the reasons discussed below, we discern no reversible error in the examiner's rejections. Accordingly, we *affirm* both rejections.

Issues

Did Appellants identify any difference between the subject matter of appealed claim 1 and the device described in DE '670?

Did Appellants demonstrate any error in the examiner's combination of DE '670 and Cooper?

Findings of Fact

The following findings of fact are supported by a preponderance of the evidence.

1. With respect to the anticipation rejection of claims 1-4 and 6-9, Applicants state that "claims 1-4 and 6-9 shall rise or fall with respect to the patentability...of claim 1." (Amended Appeal Brief at 10.)

2. With respect to the obviousness rejection of claims 5, 10, and 11, Applicants do not contest the examiner's final rejection of claims 5 and 10. (Amended Appeal Brief at 5.)

3. DE '670 describes a dishwasher in which the intensity of the spray action can be adjusted or shifted according to the degree of soiling of the dishes. (Translation at 2, lines 4-5.)

4. According to DE '670, "if very dirty dishes are to be cleaned...the intensity of the spraying must be considerably increased" (translation at 3, lines 3-5) and this is accomplished by reducing the number of active nozzles (*id*. at 3, lines 6-18.)

5. Figure 1 of DE '670 is said to depict a dishwashing machine consisting of: housing **1**, the upper area of which, separated from the lower part by a plate, has devices **2**, **3**, **4**, and **5** for holding dishes; spray nozzles **7-10** located on the bottom surface **6** of the upper area and connected to pump **12** driven by motor **11**; and a switch **14** with segments **15-18** operating in concert with solenoids **21-24** to control the number of active spray nozzles. (Translation at 2-3 and Fig. 1.)

6. Appellants acknowledge that the claim recitation "at least one dish rack" reads on the combination of bottom surface 6 and dish holders

2-5 of DE ‘670 by noting that DE ‘670 “discloses a dish rack 2-6...” (Amended Appeal Brief at 11.)

7. Based on Fig. 1 of DE ‘670, the prior art nozzles 7-10 are spaced apart at different locations within the dishwasher and are integrated with the bottom surface 6, which is a part of the prior art dish rack.

8. The applicants do not identify what *specific claim limitation* of claim 1 is missing in DE ‘670.

9. DE ‘670 does not teach the use of an automated condition sensor to control the spraying intensity at a respective region of a spraying device as recited in appealed claim 11.

10. Cooper describes the use of various sensors including a turbidity sensor to assist in the dishwasher cycle selection (“no soil, lite soil, lite soil plus, normal soil and heavy soil”). (Column 1, lines 18-21; column 2, lines 1-4 and 28-42; column 4, lines 11-14.)

11. Cooper teaches that “[t]he turbidity sensor measures the soil content in the water which is an indication of the amount of soil on the dishes.” (Column 3, lines 58-59.)

12. Claims 10 and 11 were added by amendment on June 28, 2005, which is after the date on which the subject application was filed.

13. When claims 10 and 11 were added, the applicants did not point out how these claims are supported in the disclosure, as originally filed.

Principles of Law

"[T]he PTO gives a disputed claim term its broadest reasonable interpretation during patent prosecution." *In re Bigio*, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1211 (Fed. Cir. 2004).

"To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently." *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997).

Under 35 U.S.C. § 103(a), a claimed invention is unpatentable if the differences between it and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains." The Supreme Court of the United States has held that the factual inquiry into whether claimed subject matter would have been obvious includes a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations (e.g., the problem solved) that may be indicia of (non)obviousness. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966).

Analysis

With respect to the anticipation rejection of claims 1-4 and 6-9, Applicants state that "claims 1-4 and 6-9 shall rise or fall with respect to the patentability...of claim 1." (Amended Appeal Brief at 10.)

With respect to the obviousness rejection of claims 5, 10, and 11, the applicants do not contest the examiner's final rejection of claims 5 and 10. Accordingly, we *pro forma* affirm the examiner's 35 U.S.C. § 103(a) rejection as to claims 5 and 10, leaving only claim 11 for consideration in this appeal.

We therefore confine our discussion of the rejections to claims 1 and 11. *See* 37 CFR § 41.37(c)(vii).

Claim Construction

Absent any scope limiting definition in the specification for claim terms, we do not limit broad claim terms based on specification passages. *In re Bigio*, 381 F.3d at 1324, 72 USPQ2d at 1211.

Here, Applicants do not identify any description in the specification that would serve to further limit the scope of appealed claim 1 from that derived from its plain meaning. Thus, we give appealed claim 1 its plain meaning as would be understood by one skilled in the relevant art. In particular, we construe the term

"specific areas" to encompass any number of areas without any limitation to location. Likewise, we construe the recitation "control mechanism associated with said spraying device for controlling said specific areas" to encompass any type of control mechanism including a mechanical switch operating in concert with solenoids.

Also, neither claim 11 nor the specification places any limitation on the "respective region" recited in claim 11. Thus, we construe this term to encompass any region within the dishwasher, including a vicinity of the spray device outlet.

Claim 1 -- 35 U.S.C. § 102(b)

DE '670 describes a dishwasher in which the intensity of the spray action can be adjusted or shifted according to the degree of soiling of the dishes. (Translation at 2, lines 4-5.) According to the reference, "if very dirty dishes are to be cleaned...the intensity of the spraying must be considerably increased..." and this is accomplished by reducing the number of active nozzles. (*Id*. at 3, lines 3-18.)

Figure 1 of DE '670 is said to depict a dishwashing machine consisting of: housing **1**, the upper area of which, separated from the lower part by a plate, has devices **2**, **3**, **4**, and **5** for holding dishes; spray nozzles **7-10** located on the bottom surface **6** of the upper area and connected to pump **12** driven by motor **11**; and a

switch **14** with segments **15-18** operating in concert with solenoids **21-24** to control the number of active spray nozzles. (Translation at 2-3 and Fig. 1.)

Giving appealed claim 1 its broadest reasonable interpretation, we determine that the claim recitation "at least one dish rack" reads on the combination of bottom surface 6 and dish holders 2-5 of DE '670. (See Applicants' acknowledgment in the Amended Appeal Brief at 11.) We also find that nozzles 7-10 of DE '670 are spaced apart at different locations (or "specific areas") within the dishwasher and are integrated with the bottom surface 6, which is a part of the prior art dish rack. Further, we agree with the examiner that the claim recitation "control mechanism associated with said spraying device for controlling said specific areas" is broad enough to read on the switch/solenoid combination of DE '670.

Accordingly, we find that DE '670 expressly describes each and every limitation of the invention recited in appealed claim 1. Indeed, Applicants do not tell us what *specific claim limitation* of claim 1 is missing in DE '670. Instead, they assert that DE '670 does not provide "any motivation to one of ordinary skill in the art to modify its jet arrangement..." (Amended Appeal Brief at 11.) The issue of motivation, however, is not relevant to an anticipation rejection under 35 U.S.C. § 102.

To the extent that Applicants believe that the term "specific areas" specifies some sort of "jet arrangement" not described in the prior art, we reject such a notion. As we discussed above, the term "specific areas" broadly encompasses any number of areas without any limitation as to specific location. The term therefore reads on the "jet arrangement" disclosed in Figure 1 of DE '670.

For these reasons, we affirm the examiner's 35 U.S.C. § 102(b) rejection.

Claim 11 -- 35 U.S.C. § 103(a)

Appealed claim 11 requires the "spraying device to provide a more intensive spraying of a respective region in response to the sensing by said sensor [recited in appealed claim 10] of a condition in the dishwasher indicating that items in the respective region have a soil condition requiring a more intensive spraying." As discussed, neither the claim nor the specification places any limitation on the "respective region." It is therefore appropriate to construe this term to encompass any region within the dishwasher including the vicinity of the spray device outlet.

DE '670 does not teach the use of an automated condition sensor to control the spraying intensity at a respective region of a spraying device as recited in appealed claim 11. Nevertheless, DE '670 teaches that when the dishes are heavily soiled, the spray intensity should be increased by reducing the number of active sprays. (Translation at 3, lines 3-18.)

Cooper describes the use of various sensors including a turbidity sensor to assist in the dishwasher cycle selection ("no soil, lite soil, lite soil plus, normal soil and heavy soil"). (Column 1, lines 18-21; column 2, lines 1-4 and 28-42; column 4, lines 11-14.) Cooper teaches that "[t]he turbidity sensor measures the soil content in the water which is an indication of the amount of soil on the dishes." (Column 3, lines 58-59.)

As noted, DE '670 teaches that the spray intensity is manually controlled in response to the degree of soiling. We therefore conclude that one of ordinary skill in the art would have found it obvious to automate the control of the spray intensity at a location within the dishwasher of DE '670 with one or more turbidity sensors, which (according to Cooper) are known in the art to measure the degree of dish soiling, thus arriving at a device encompassed by appealed claim 11. The motivation to modify the dishwasher of DE '670 in this manner comes from the desire of one of ordinary skill in the art to provide an automatic dishwasher that does not require manual activation/deactivation of the spray nozzles. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 192, 195 (CCPA 1958)("[I]t is well settled that it is not 'invention' to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result.").

While Applicants argue that neither DE '670 nor Cooper "teach[es] or suggest[s] any interconnected operation of the jets 7-10 of [DE '670] and the

turbidity sensor of [Cooper]," they do not assert that the modification of DE '670 dishwasher to include a turbidity sensor to automate the activation/deactivation of the spray nozzles would require more than merely common knowledge and/or ordinary skill in the art. (Amended appeal brief at 13-14.) Instead, they urge that the applied prior art references do not teach "how the two different arrangements of these two references should be combined with one another." (Amended Appeal Brief at 13.)

We see no merit in Applicants' stated position. The examiner cited Cooper to show that a turbidity sensor may be used to monitor the degree of soiling of dishes, which is the same condition that is monitored in DE '670 to manually activate/deactivate the solenoids. Given this teaching and the knowledge of one of ordinary skill in the art, we determine that the combination of DE '670 and Cooper would have suggested the use of a turbidity sensor to automate the activation/deactivation of the solenoids in DE '670. *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.").

For these reasons, we affirm the examiner's 35 U.S.C. § 103(a) rejection.

Other Issues

Claims 10 and 11 were added by amendment during prosecution on June 28, 2005. It appears from the record that the examiner did not consider whether these claims are supported in the disclosure, as originally filed. In the event of continued prosecution, the examiner should consider the written description requirement of 35 U.S.C. § 112, ¶1 for the full scope of claims 10 and 11.

ORDER

For these reasons, it is:

ORDERED that the examiner's rejections of (i) claims 1-4 and 6-9 under 35 U.S.C. § 102(b) as anticipated by DE '670 and (ii) claims 5, 10, and 11 under 35 U.S.C. § 103(a) as obvious over DE '670 are *AFFIRMED*.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR 1.136(a).

AFFIRMED

/Teddy S. Gron/	)
TEDDY S. GRON	)
Administrative Patent Judge	)
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	)
/Romulo H. Delmendo/	) BOARD OF PATENT
ROMULO H. DELMENDO	)
Administrative Patent Judge	) APPEALS AND
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