

Filed: October 24, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COSTCO WHOLESALE CORPORATION,
Petitioner,

v.

ROBERT BOSCH LLC,
Patent Owner.

Case IPR2016-00034
Patent 6,973,698

SECOND DECLARATION OF DR. GREGORY W. DAVIS

Costco Exhibit 1103, p. 1

I. INTRODUCTION

I, Dr. Gregory W. Davis, hereby declare the following:

1. I previously prepared a declaration in support of the unpatentability of U.S. Patent No. 6,973,698 (the “698 Patent”), which I understand was submitted as Exhibit 1013 to Costco Wholesale Corporation’s Petition for *Inter Partes* Review of U.S. Patent No. 6,973,698 (Paper No. 1) (the “Petition”).

2. I understand that *inter partes* review was instituted on claim 1 of the ’698 Patent on the following grounds:

- Obviousness under 35 U.S.C. § 103(a) in view of U.S. Patent No. 4,807,326 to Arai (Ex. 1004; “Arai”) and U.S. Patent No. 4,028,770 to Appel (Ex. 1006; “Appel ’770”)
- Anticipation under 35 U.S.C. § 102(b) based on U.S. Patent No. 5,325,564 to Swanepoel (Ex. 1009; “Swanepoel”)

See Institution Decision (Paper No. 16) (the “Decision”).

3. I have reviewed the Decision, Patent Owner’s Response to Costco’s Petition (Paper No. 26) (the “Response”), as well as the Exhibits to that Response, including the Declaration of Dr. Dubowsky (Ex. 2003).

4. In performing my analysis I have considered the claims of the ’698 Patent, any differences between the claimed subject matter and the prior art patents and printed publications identified in my first declaration (Ex. 1013 ¶¶ 2–3), and

Costco Exhibit 1103, p. 2

the level of ordinary skill in the art of the '698 Patent as of not later than April 1, 1998, which I understand is the filing date of the German application to which the '698 Patent claims priority.

5. Furthermore, in forming my opinions, I considered and relied upon the contents of the patents and printed publications discussed below. In interpreting and explaining the contents of these patents and printed publications, I relied on my educational background, industry work experience, and teaching experience as set forth in an appendix to my earlier declaration. *See* Ex. 1013 ¶¶ 4–12, p. 39 (App'x A). An updated version of my *curriculum vitae* is attached hereto as Appendix A. Even under Patent Owner and Patent Owner's expert's definition, I believe I qualify as a person of ordinary skill in the art.

II. ANALYSIS AND OPINIONS

6. I have the following comments in response to Dr. Dubowsky's declaration (Ex. 2003) and Patent Owner's Response.

A. A Person of Ordinary Skill in the Art Would Have Understood Appel '770 to Incorporate the Progressive Curvature Teachings of Appel '551

7. In my earlier declaration, I discussed the teachings Arai, Appel '770, and U.S. Patent No. 3,192,551 to Appel (Ex. 1005; "Appel '551"), and expressed my opinion that claim 1 of the '698 Patent would have been obvious to a person having ordinary skill in the art over the combination of Arai and Appel '770. *See*

Ex. 1013 ¶¶ 17, 50–54, 60.

8. Appel '770 teaches that “progressive contact . . . as increasing pressure is applied at the center” may be achieved by “incorporating progressive dimensional variations in free form curvature” as disclosed in Appel '551, which is incorporated into Appel '770 by reference. Appel '770, 3:18–30, 44–51; *see also* Ex. 1013 ¶¶ 28, 31.

9. Additionally Appel '551 discloses a spring with “progressive dimensional variations in free form curvature,” including a “parabolic” spring with curvature greater in the center than at the ends. Appel '551, 1:23–34, 2:23–45, 3:9–22, 31–36, 3:63–4:17, figs. 1a–1c; *see also* Ex. 1013 ¶¶ 32–33.

10. Appel '770 teaches that “in the aforementioned United States patent incorporated by reference [(Appel '551)],” a superstructure may “incorporat[e] progressive dimensional variations in free form curvature.” Appel '770, 3:44–51. Appel '551 discusses “progressive dimensional variations in free form curvature,” which includes a parabolic spring having a curvature greater at its center than at its ends. Appel '551, 3:16–22, figs. 1a–1c.

11. Because they use the common terminology, *progressive variations in curvature*, a person of ordinary skill would have understood Appel '770 to be referring to, and incorporating by reference, the spring of Appel '551 having a curvature greater in its center section than at its end sections.

B. A Person of Ordinary Skill in the Art Would Have Been Motivated to Combine the Teachings of Arai and Appel '770

12. There is nothing in Arai that would have dissuaded a person of ordinary skill in the art from modifying the curvature of the disclosed backbone. Similarly, there is nothing in Appel '770 that would have dissuaded a person of ordinary skill in the art from applying its curvature teaching to blades with other superstructures. As discussed above, both Arai and Appel '770 are directed to ways of improving wiping quality for curved windshields. Modifying Arai's backbone, which has the function of distributing the force from the wiper arm to the wiper strip, as discussed above, to include the parabolic curvature of Appel '770, which has the function, discussed above, of matching the flat-spring wiper to a curved windshield, would have been expected by a person of ordinary skill to result in a wiper that exhibited both beneficial functions.

C. A Person of Ordinary Skill Would Have Understood Swanepoel to Teach a Force Distribution Over the Entire Length of the Wiper

13. In my earlier declaration, I discussed the teachings of Swanepoel, and expressed my opinion that it discloses each and every element of claim 1 of the '698 Patent. *See* Ex. 1013 ¶¶ 39–48, 58.

14. Swanepoel describes a force per unit length distribution “not illustrated in FIG. 4” that reaches a constant value in the center section, and then decreases to zero at the tips. Swanepoel, 2:8–20; 5:13–18; 9:33–36; *see also*

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