

NOTE: This disposition is nonprecedential.

## United States Court of Appeals for the Federal Circuit

2009-1277  
(Serial No. 10/374,800)

IN RE DOUGLAS J. SHONER

Douglas J. Shoner, of Hawthorne, California, pro se.

Raymond T. Chen, Solicitor, Office of the Solicitor, United States Patent and Trademark Office, of Arlington, Virginia, for the Director of the United States Patent and Trademark Office. With him on the brief were Mary L. Kelly and Frances M. Lynch, Associate Solicitors.

Appealed from: United States Patent and Trademark Office  
Board of Patent Appeals and Interferences

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Appeal from the United States Patent and Trademark Office, Board of Patent Appeals and Interferences.

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DECIDED: August 10, 2009

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Before LOURIE, CLEVINGER, and SCHALL, Circuit Judges.

LOURIE, Circuit Judge.

## DECISION

Douglas Shoner appeals from the final decision of the Board of Patent Appeals and Interferences (“Board”) affirming the examiner’s rejection of all seven claims of appellant’s patent application as obvious under 35 U.S.C. § 103(a). Ex parte Shoner, No. 2008-1960 (B.P.A.I. July 31, 2008). Because the Board did not err in its decision, we affirm.

## BACKGROUND

Shoner filed U.S. Patent Application No. 10/374,800 (the “800 application” or “Shoner’s application”) on February 25, 2003. Shoner’s application claims a Cellular Tire Liner and Air Chamber System for Pneumatic Tires. Claim 1 of the ’800 application reads as follows:

1. A cellular tire liner and air chamber system for lining the interior of a pneumatic tire, said system comprising:
  - a. a cellular tire liner having an elastometric cellular structure composed of a multiplicity of elastometric cells;
  - b. an air chamber for said interior of said pneumatic tire that is subsequently sealed and pressurized;
  - c. when said cellular tire liner and air chamber system is lining said interior of said pneumatic tire, said cellular tire liner being interposed between the interior surface of said pneumatic tire and said air chamber;
  - d. when said cellular tire liner and air chamber system is lining said interior of said pneumatic tire, a multiplicity of said cellular tire liners are used in said interior to line said pneumatic tire, said multiplicity of said cellular tire liners establishing a segment configuration;
  - e. when said cellular tire liner and air chamber system is lining said interior of said pneumatic tire, a substantial portion of the exterior surface of said cellular tire liner that is adjacent to said air chamber forming essentially a vee shape, with the widest part of said essentially vee shape furthest from the tread area of said pneumatic tire;
  - f. when said cellular tire liner and air chamber system is lining said interior of said pneumatic tire and said pneumatic tire is mounted onto a wheel, upon pressurization of said air chamber, said segment configuration causes the force exerted by said pressurized air chamber on said cellular tire liner circumferentially, to be a compression load, whereby said segment configuration precludes a circumferential tension load from being applied to said cellular tire liner by air chamber pressurization;
  - g. when said cellular tire liner and air chamber system is lining said interior of said pneumatic tire and said pneumatic tire is mounted onto a wheel, upon pressurization of said air chamber, said pressurized air chamber exerts a constant force on said multiplicity of said cellular tire liners and presses said multiplicity of said cellular tire liners against said interior surface of said pneumatic tire, whereby said pressurized air chamber completes the required force necessary to establish the entire load bearing capability of said pneumatic tire when said air chamber is sufficiently pressurized.

The patent examiner assigned to the '800 application issued a final rejection of all pending claims. The examiner found that U.S. Patent 6,116,308 ("Yoshida") taught all of the elements of claims 1-3 and 5-7 of Shoner's application, with the exception of the

“segment configuration” of the tire liners, as seen in subparagraph (d) of claim 1. The examiner cited numerous prior art publications that she felt demonstrated that it was “notoriously well-known” to produce tire cores in segments in order to facilitate mounting. Thus, according to the examiner, one skilled in the art would have found the combination of segment configuration with Yoshida to have been obvious. The examiner therefore rejected claims 1-3 and 5-7. Regarding claim 4, the examiner found that Yoshida and the segmented configuration prior art, in combination with a patent previously issued to Shoner, U.S. Patent 5,031,679 (“the ’679 Patent”), also rendered that claim obvious. Shoner appealed the examiner’s rejections to the Board.

The Board affirmed the examiner’s decision. In its analysis, the Board examined claims 1 and 4 of the ’800 application. Because the Board adopted the examiner’s findings as to obviousness, we assume that the Board adopted the examiner’s conclusion that claims 2 and 3 rise or fall with the patentability of claim 1. Claims 5-7 of the ’800 application are dependent claims. The Board found that the Examiner’s rejection “present[ed] a reasonable basis to conclude that the invention, as claimed in claims 1 and 4, would have been obvious to one of ordinary skill in the art at the time of invention.” Ex parte Shoner, No. 2008-1960, slip op. at 10. The Board also found that a declaration submitted by Shoner purporting to establish superior results of his patented tire over prior art tires was “not persuasive in establishing non-obviousness of the claimed invention.” Id. at 12.

Shoner timely appealed the Board’s decision. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

## DISCUSSION

Section 103(a) of title 35 of the U.S. Code “forbids issuance of a patent when ‘the differences between the subject matter sought to be patented 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 said subject matter pertains.’” KSR Int’l Co. v. Teleflex, Inc., 550 U.S. 398, 405 (2007) (quoting 35 U.S.C. § 103(a)). “Determination of obviousness under 35 U.S.C. § 103 is a legal conclusion based on underlying facts.” In re Kumar, 418 F.3d 1361, 1365 (Fed. Cir. 2005). This court reviews “the Board’s ultimate determination of obviousness de novo,” while the Board’s underlying findings of fact are reviewed under a substantial evidence standard. In re Kotzab, 217 F.3d 1365, 1369 (Fed. Cir. 2000).

On appeal, Shoner presents the same primary argument that he presented to the Board. Shoner argues that the ’800 application claims, and Yoshida does not teach, an air chamber that “is sealed separately from the rest of the tire cavity.” According to Shoner, subparagraphs b, c, and h of claim 1 claim a separately sealed cavity, and none of the cited references includes that limitation.

In response, the Director of the PTO argues that claim 1 of Shoner’s application is not limited to the structure that Shoner urges. Because the PTO is required to give claims their broadest reasonable interpretation, the Director claims that it would be improper to read Shoner’s suggested structural limitation into the ’800 application’s claims. Therefore, the Director urges us to affirm the Board’s decision.

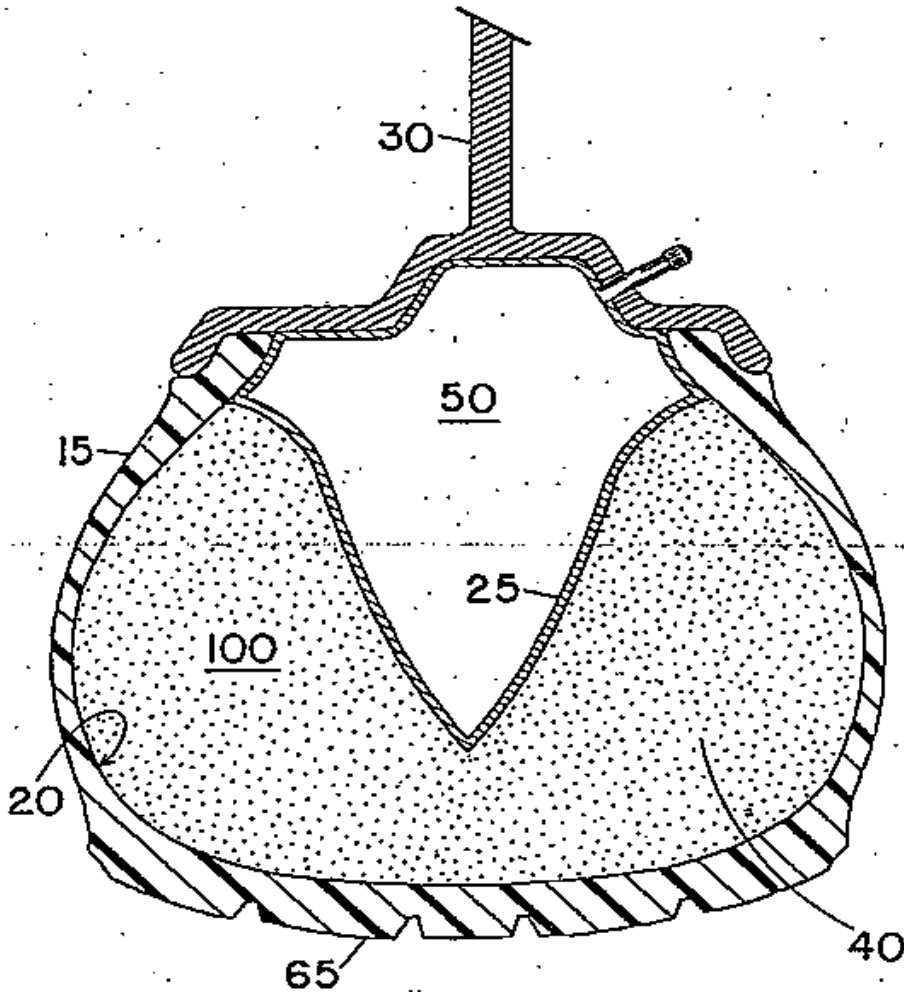
We agree with the Director that Yoshida, in combination with the references that teach segmented construction, renders the claims of the ’800 application obvious. We

note that Shoner does not argue that the Board's combination of references would not have been obvious to one of ordinary skill in the art. Nor does he present any argument that claims 2-7 are distinct from claim 1 to such a degree that they would be nonobvious regardless whether claim 1 was obvious. Rather, the only issue for us to decide on appeal is whether claim 1 is limited to an air chamber that is separately sealed from the rest of the tire cavity. The other claims stand or fall on that question. For the reasons described below, we conclude that it is not.

Claim 1 of the '800 application claims a system for lining the interior of a tire that consists of a cellular tire liner and a v-shaped air chamber. Claim 1 further limits the air chamber to one that is "sealed and pressurized," '800 application ¶ (b), that is "adjacent to" the cellular tire liner, id. ¶ (f), that forms "an essentially vee shape . . . with the widest part of said essentially vee shape farthest from the tread area" of the tire, id., and that produces a constant pressure against the tire liner, id. ¶ (h). Shoner concedes that Yoshida contains all those limitations, except for the requirement that the air chamber be "sealed." According to Shoner, the '800 application requires a structure for sealing the air chamber that is separate from the rest of the interior of the tire, such as an inner tube, whereas Yoshida does not have such a structure. Thus, according to Shoner, Yoshida's system will not produce the results required by subparagraphs (b), (c), and (h) of claim 1 of the '800 patent.

We acknowledge that the specification of the '800 application describes an invention that has a sealed air chamber that is structurally separate from the rest of the tire cavity. See e.g., '800 application fig.4. Figure 4 of the '800 application, reproduced

below, evidences the specification's description of a separate structure for the air chamber.



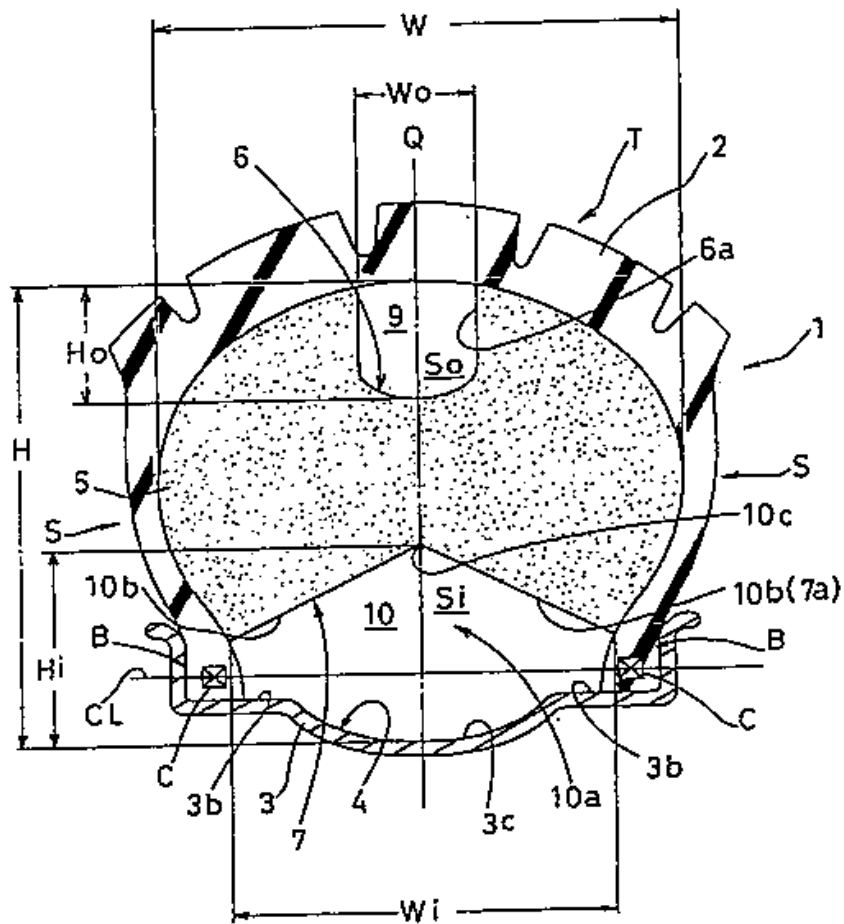
The description of figure 4 states that air chamber, 50, is “sealed by means of inner tube,” 25. '800 application ¶ 37.

However, claim 1 of the '800 application does not limit the invention to one in which the air chamber is sealed with an inner tube or similar structure. Claim 1 requires only that the air chamber be “sealed and pressurized.” '800 application claim 1 ¶ (b). There is no limitation in the language of subparagraph (b) of claim 1 that would narrow the meaning of “sealed” to a particular structure. The PTO is required to give claim

terms their “broadest reasonable interpretation consistent with the specification,” and there is nothing in the specification that would explicitly limit the air chamber to a particular structure. We therefore must adopt the PTO’s broad interpretation of “sealed” to include any structure that seals and pressurizes the air chamber. See In re Bigio, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (“Absent claim language carrying a narrow meaning, the PTO should only limit the claim based on the specification or prosecution history when those sources expressly disclaim the broader definition.”).

Yoshida teaches a “sealed and pressurized” air chamber. Figure 1 of Yoshida is reproduced below:





Shoner does not dispute that Yoshida teaches an air chamber, 10, that is “pressurized.” Although Yoshida does not disclose an inner tube or other structure in which to seal and pressurize the air chamber, the air chamber must be sealed, otherwise it could not be pressurized. Clearly, the air chamber, 10, in Yoshida is sealed from atmospheric air pressure by the tire core, 5, and the wheel rim, 3. As we have shown above, claim 1 of the '800 application requires only that an air chamber be sealed; there is no requirement that the air chamber be sealed separately from the tire core or the wheel rim. Yoshida therefore teaches an air chamber that is “sealed and pressurized.” Because Shoner

does not argue that the Board erred in finding that Yoshida meets the other relevant limitations of claim 1 of the '800 application, we therefore affirm the Board's finding that the claims of the '800 application would have been obvious.

We also agree with the Board that Shoner's declaration purporting to establish superior results is "not persuasive" in establishing nonobviousness. Shoner's declaration describes the tests he conducted using tire liners designed in accordance with one of his earlier issued patents, not the patent application at issue in this case. The declaration does not purport to relate to the tire liner of the '800 application and therefore does not overcome the prima facie case of obviousness.

We thus affirm the judgment of the Board.