

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

MAILED

MAY 21 1996

Ex parte REYMOND W. LIPPER

PAT & TM OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Appeal No. 96-0773  
Application 07/922,685<sup>1</sup>

ON BRIEF

Before MEISTER, ABRAMS and STAAB, Administrative Patent Judges.  
MEISTER, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 2, 4, 7 and 8. Claims 3, 5, 6, 9, 10 and 16, the only other claims remaining in the application, have been allowed by the examiner.

<sup>1</sup> Application for patent filed July 29, 1992.

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The appellant's invention pertains to a method of forming an automotive wheel. Independent claim 1 is further illustrative of the appealed subject matter and reads as follows.

1. A method for forming an automotive wheel, said automobile wheel comprising a rim and a center section having a hub, said method comprising the steps of:

providing a circular disk of aluminum to form said center section, said circular disk having a predetermined thickness, said circular disk including concentric center, outer and edge portions, said outer portion having a front surface and a rear surface;

forming said hub from said center portion of said circular disk by employing at least a step of drawing the center portion, said hub including a cylindrical side wall and a mounting surface, said cylindrical side wall extending axially rearward from said rear surface of said outer portion, said outer portion extending radially outward from a first bend at an end of said cylindrical side wall, said mounting surface extending radially inward from and oriented substantially perpendicular to a second bend at an opposite end of said cylindrical side wall, whereby said cylindrical side wall provides an axial distance from said rear mounting surface to said front surface of said outer portion at a point radially adjacent to said mounting surface;

providing a rim; and

mounting said center section within said rim to form said automotive wheel.

The prior art relied on by the examiner is:

Bierwirth et al. (Bierwirth) 2,088,992 Aug. 03, 1937

The appellant's disclosure of prior art set forth on pages 1-3 of the specification and depicted in Figs. 3a-3d of the drawings (the admitted prior art).

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Claims 1, 2, 4, 7 and 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over the admitted prior art in view of Bierwirth. According to the examiner

[t]he admitted prior art teaches the formation of a wheel center section having a hub structure set forth in the claims as well as the provision of an aluminum disk from which the structure is formed (by a machining process), the provision of a rim and the mounting of the formed center section in the rim to form the wheel. Bierwirth teaches that it is known in the formation of wheel center sections to use a drawing process to move center sections out of the plane of a circular disk blank. (In particular, see Fig. 3 and column 1, lines 31-36 of Bierwirth.) In view of the teaching of Bierwirth that a center portion of a disk could be drawn out of the plane of a starting disk element, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the forming process of the admitted prior art to draw the center portion out of a disk and thereby avoid machining costs (see answer, pages 2 and 3).

Rather than reiterate the arguments of the appellant and the examiner in support of their respective positions, reference is made to the brief and answer for the full exposition thereof.

#### OPINION

We have carefully considered the appellant's invention as described in the specification, the appealed claims, the prior art applied by the examiner and the respective positions advanced by the appellant in the brief and reply brief and by the examiner

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in the answer. These considerations lead us to conclude the prior art relied on by the examiner establishes the obviousness of the appealed claims within the meaning of 35 U.S.C. § 103. Accordingly, we will sustain the examiner's rejection of the appealed claims on this ground. Additionally, pursuant to our authority under the provisions of 37 C.F.R. § 1.196(d), we will recommend that allowed claims 3, 6, 9 and 10 likewise be rejected under 35 U.S.C. § 103.

With respect to the examiner's rejection of claims 1, 2, 4, 7 and 8 under 35 U.S.C. § 103 based on the combined disclosures of the admitted prior art and Bierwirth, the appellant notes the deficiencies of the admitted prior art and Bierwirth individually and urges that there is no suggestion to combine their teachings. We are unpersuaded by the appellant's arguments.

It is true that the obviousness of an invention cannot be established by combining the teachings of the prior art absent some teaching, suggestion or incentive supporting the combination. *See Acs-Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). This does not mean, however, that the cited references or prior art must specifically suggest making the combination. *See In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988). Instead, the test for obviousness is what the combined

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teachings of the references would have suggested to those of ordinary skill in the art. See *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. See *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Here, the admitted prior art teaches a method of making an automotive wheel which includes the step of forming a center section from a circular disc of aluminum having concentric center and outer portions and thereafter attaching or mounting the formed center section to the interior of a wheel rim by welding (see specification, page 1). In the admitted prior art the center section is formed by a machining operation (see specification, page 2) and is of the same general shape as that of appellant's center section (compare prior art Fig. 3d vis-à-vis Fig. 8 of the appellant's drawing). This shape includes a center portion having a cylindrical side wall, an "outer portion," a mounting surface and first and second "bends"<sup>2</sup> or

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<sup>2</sup> The Random House Dictionary of the English Language, Second Edition-Unabridged, published by Random House Inc., New York, N.Y. defines "bend" as -- something that bends; curve; crook: a bend in the road; the bend in the curtain rod --.

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curved portions at each end of the cylindrical side wall. On the other hand, Bierwirth teaches the formation of a center section of a wheel, including a hub portion A and an "outer portion" (e.g., b<sup>2</sup>) from a circular disk of metal by a series of stamping or bending operations (see the paragraph bridging columns 1 and 2 on page 1) so that the center portion can be "manufactured at low cost" (see page 1, column 2, line 6). As the examiner has correctly noted Bierwirth also teaches that, as an initial step in the forming process, the center portion should be "drawn" in the same manner as the appellant's center portion is initially "drawn" (compare FIG. 3 of Bierwirth to the appellant's initial step of drawing as depicted in Fig. 5). Subsequent to this initial drawing step, Bierwirth thereafter forms the center portion to its desired final shape (see Fig., 8) by the above-noted series of stamping or bending operations. Applying the test for obviousness<sup>3</sup> as set forth in *In re Keller, supra*, we are satisfied that a combined consideration of the admitted prior art

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<sup>3</sup> 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.

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and Bierwirth would have fairly suggested to the artisan the manufacture of an aluminum center portion of a shape depicted by the admitted prior art in Fig. 3d from a circular disk of aluminum by initially "drawing the center portion" of the circular disk and thereafter shaping it to the final depicted configuration by a series of bending operations as taught by Bierwirth, motivated by Bierwirth's expressly stated advantage of providing a center portion of "low cost."

As to the appellant's various individual criticisms of the relied on art (e.g., that the center portion of the admitted prior art is machined from a relatively thick disk of aluminum rather than being "drawn" or bent and that in Bierwirth (a) the center portion is formed from a "circular blank of sheet metal" rather than aluminum, (b) there is no cylindrical side wall and (c) the shape of the center portion is different), we note that nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986).

The appellant has not separately argued the patentability of dependent claims 2, 4, 7 and 8. Accordingly, these claims fall with independent claim 1. *See In re Nielson*, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987) and *In*

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re *Schrader*, 22 F.3d 290, 292, 30 USPQ2d 1455, 1456 (Fed. Cir. 1994) at footnote 3.

In view of the foregoing, we will sustain the examiner's rejection of claims 1, 2, 4, 7 and 8 based on the combined disclosures of the admitted prior art and Bierwirth.

Pursuant to our authority under the provisions of 37 C.F.R. § 1.196(d) we recommend that claims 3, 6, 9 and 10 also be rejected under 35 U.S.C. § 103 as being unpatentable over the combined disclosures of the admitted prior art and Bierwirth and remand the application to the examiner for this purpose. The examiner apparently allowed these claims in view of the steps set forth in claim 3 of forming the hub by "drawing and stamping said center portion of said circular disk to form said cylindrical side wall and said mounting surface." However, as we have noted above in our affirmance of the examiner's rejection of claims 1, 2, 4, 7 and 8 under 35 U.S.C. § 103, the admitted prior art shows a center portion having a shape or configuration substantially the same as that of the appellant, including a mounting surface and cylindrical side wall. On the other hand, Bierwirth discloses that, after an initial drawing step (see FIG. 3), his center portion is formed to its desired final shape by a series of stamping or bending operations (see the paragraph bridging columns 1 and 2 of page 1), thus providing a center portion of "low cost" (see page 1, column 2, line 6). In view of the

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combined teachings of the admitted prior art and Bierwirth, one of ordinary skill in this art would have found it obvious to manufacture an aluminum center portion of a shape depicted by the admitted prior art in Fig. 3d from an aluminum circular disk by initially "drawing the center portion" of the circular disk followed by a series of bending operations necessary to arrive at the depicted shape in view of the teachings of Bierwirth, motivated by Bierwirth's expressly stated advantage of providing a center portion of "low cost."

In summary:

The examiner's rejection of claims 1, 2, 4, 7 and 8 under 35 U.S.C. § 103 is affirmed.

A remand of this rejection is made under the provisions of 37 C.F.R. § 1.196(d).

Pursuant to the provisions of 37 CFR 1.196(d), the application is remanded to the Primary Examiner for consideration of the above ground of rejection of allowed claims 3, 6, 9 and 10. A period of two months is set in which the appellant may submit to the Primary Examiner an appropriate amendment, or a showing of facts or reasons, or both, in order to avoid the ground of rejection of the identified allowed claims.

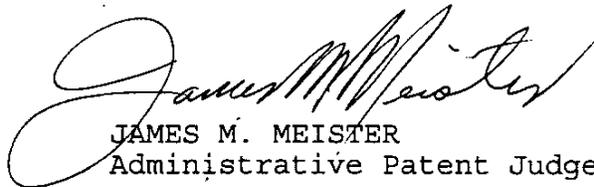
Upon conclusion of the proceedings before the Primary Examiner on remand, this case should be returned to the Board by the Primary Examiner so that the Board may either adopt its

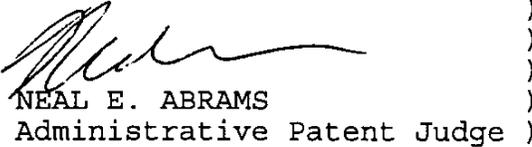
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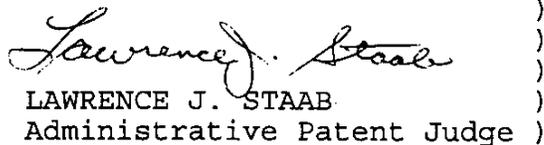
decision as final or render a new decision on all of the claims on appeal, as it may deem appropriate. Such return is unnecessary if the application is abandoned as the result of an unanswered Office action, allowed or again appealed.

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

**AFFIRMED AND REMANDED**  
**37 C.F.R. § 1.196(d)**

  
JAMES M. MEISTER )  
Administrative Patent Judge )

  
NEAL E. ABRAMS )  
Administrative Patent Judge )

  
LAWRENCE J. STAAB )  
Administrative Patent Judge )

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