UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER SAILER and OLIVER SCHNELL

Appeal 2008-2041
Application 11/063,444
Technology Center 3700

Decided: August 27, 2008

Before HUBERT C. LORIN, ANTON W. FETTING, and
MICHAEL W. O'NEILL, *Administrative Patent Judges*.

O'NEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Peter Sailer, et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1, 3, and 5. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We REVERSE.[1]

THE INVENTION

The claimed invention relates to hydraulic lash adjuster.

Claim 1, reproduced below, is representative of the subject matter on appeal.

> Claim 1 A hydraulic lash adjuster (1) comprising a hollow cylindrical housing (2) that is inter-inserted with an axially relatively displaceable pressure piston (3), wherein a high pressure chamber (6) for hydraulic medium extends between opposing front ends (4, 5) of the pressure piston (3) and the housing (2), which high pressure chamber (6) can be supplied, via a one-way valve (8) arranged on an undersurface (7) of the front end (4) of the pressure piston (3) and opening towards the high pressure chamber (6), with hydraulic medium out of a reservoir (9) enclosed by the pressure piston (3), a leak gap (12) for the hydraulic medium out of the high pressure chamber (6) is formed between an outer peripheral surface (10) of the pressure piston (3) and a bore (11) of the housing (2), the front end (5) of the housing (2) forms a stop surface (13) for an annular portion (14) of the front end (4) of the pressure piston (3) in a sunk state of the pressure piston (3), in a portion adjoining the front end (5) of the housing (2), the bore (11) of the housing (2) merges into an annular enlargement (15), wherein the front end (4) of the pressure piston (3) comprises in a transition region to the outer peripheral surface (10), a wiping chamfer (16) whose height (H_F) is larger than the height (H_R) of the annular enlargement (15) and the chamfer (16) has an angle (α) in a range of 30° ± 15° relative to the outer peripheral surface (10) of the pressure piston (3) and the lash adjuster to

[1] Our decision will make reference to Appellants' Appeal Brief ("App. Br.," filed Jan. 10, 2007), Reply Brief ("Reply Br.," filed Apr. 25, 2007), and the Examiner's Answer ("Answer," mailed Mar. 28, 2007).

> provide additional volume in this space where undesired particles can be dispersed without adhering to the pressure piston (1) is installed in a cam follower (17) or in a support element of a cam follower of a valve train of an internal combustion engine, or is an integral part thereof.

THE PRIOR ART

The Examiner relies upon the following as evidence of unpatentability:

Line	US 2,874,685	Feb. 24, 1959
Schirmer	US 4,706,971	Nov. 17, 1987
Owen	US 6,439,186 B1	Aug. 27, 2002
Maeno	US 2004/0211380 A1	Oct. 28, 2004

THE REJECTIONS

The following rejections are before us for review:

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Line and Owen.

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Line, Owen, and Schirmer.

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Line, Owen, and Maeno.

ISSUES

The issue is whether Line describes a chamfer at one end of the piston 16. If Line does describe a chamfer, the next issue is whether the angle of

the chamfer is within the range between 15° to 45° relative from the outer peripheral surface of piston 16.

FINDINGS OF FACT

We find that the following enumerated findings of fact (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

Scope and content of the prior art

1. Line describes a hydraulic valve lifter (tappet) 10. Line describes the tappet is constructed from a hollow cylindrical body 12 closed at one end 14, a hollow piston 16, a cap 18 seated on open end of piston, a check valve 20 within a valve cage 22 for engagement with end of the piston opposite cap 18, and a coil spring arranged at the bottom of body 12. (Line, col. 2, ll. 10-18.) The body 12 of tappet 10 contains an annular groove 32 that provides a shoulder 34 for engaging an end surface 40 of piston 16. (Line, col. 2, ll. 19-23.)
2. Owen describes a hydraulic valve lifter is contained within a lifter bore of the surrounding internal combustion engine structure. (Owen, col. 3, ll. 13-14.)
3. Schirmer describes seal rings when such rings seal off only in the axial direction can be considered oil wiper rings.
4. Maeno describes a lash adjuster may be used in an auto-tensioner or chain-tensioner. (Maeno ¶ 0075.)

Differences between the claimed invention and the prior art

5. The claimed subject matter differs from the prior art in that it has a chamfer, at the end of the piston, that has an angle (α) in a range of 30° ± 15° relative to the outer peripheral surface of the piston.

The level of skill in the art

6. Neither the Examiner nor the Appellants has addressed the level of ordinary skill in the pertinent art of hydraulic lash adjusters used in internal combustion engines. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) ("[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown'") (Quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

Secondary considerations

7. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

PRINCIPLES OF LAW

Obviousness

"Section 103 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.*, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734 ("While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.") The Court in Graham further noted that evidence of secondary considerations "might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." 383 U.S. at 17-18.

Examiner's Burden

In rejecting claims under 35 U.S.C. § 103(a), the Examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992); *see also In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). All the claim limitations must be taught or suggested by the prior art to establish a prima facie case of obviousness. *In re Royka*, 490 F.2d 981, 984-85 (CCPA 1974). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the appellant. *See Oetiker*, 977 F.2d at 1445; *see also Piasecki*, 745 F.2d at 1472. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *Id.*

Appellants' Burden

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86

(Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of prima facie obviousness or by rebutting the prima facie case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

ANALYSIS

The Appellants have chosen to challenge the Examiner's prima facie case of obviousness by contending Line's chamfer (the surface area of piston 16 adjacent to annular groove) fails to have an angle (α) in a range of 30° ± 15° relative to the outer peripheral surface of the piston 16. (Reply Br. 2.) The Examiner finds "the chamfer appears to have an angle in a range of 15 to 45 degrees relative to the outer peripheral surface of the pressure piston." (Answer 4.) The Examiner bolsters this statement with a magnified portion of figures 1 and 3. (*Id*.) The Appellant contends "there is no suggest[ion] of any angle, much less an angle of 30° ± 15°." (Reply Br. 2.) We agree with the Appellant.

In our view, the Examiner's finding that "the chamfer appears to have an angle in a range of 15 to 45 degrees … " is speculative. It assumes a chamfer exists on piston 16. However, Line does not describe a chamfer structure on the end of piston 16. (FF 1.) Line does not describe a chamfer angle. (*Id*.) Based on our review of the record, the closest description of a chamfer at the end of the piston 16 (see Figs. 1 and 3) is that portion of the surface area of piston 16 adjacent annular groove. It appears to have an ever-so slight taper. While, a drawing can provide an enabling disclosure of

a claimed limitation, the drawing must be evaluated for what it reasonably discloses and suggests to one of ordinary skill in the art. *In re Aslanian*, 590 F.2d 911 (CCPA 1979). The question is whether this description of an ever-so slight taper would lead one of ordinary skill in the art to a chamfer angle within the range claimed. In that regard, the Examiner has not articulated an apparent reasoning with logical underpinning why would lead one of ordinary skill given only Figs. 1 and 3 would modify Line to provide a chamfer angle of 30° ± 15° at the end of piston 16. Rather, the reasoning used is based on speculation.

The Appellants have identified an error in the Examiner's prima facie case of obviousness with respect to the scope and content of Line. The Examiner does not rely on Owen, Schirmer, or Maeno to cure the deficiency of Line with respect to the chamfer angle of 30° ± 15°. Accordingly, we will not sustain the rejection of claim 1, 3, and 5.[2]

CONCLUSIONS OF LAW

We conclude that the Appellants have identified an error in the Examiner rejection of claim 1 as being unpatentable over Line and Owen.

We conclude that the Appellants have identified an error in the Examiner rejection of claim 3 as being unpatentable over Line, Owen, and Schirmer.

[2] We need not reach the other contentions raised by the Appellants in the Briefs with respect to the Examiner's rejection of claims 1, 3, and 5.

We conclude that the Appellants have identified an error in the Examiner rejection of claim 5 as being unpatentable over Line, Owen, and Maeno.

DECISION

The Examiner's decision to reject claims 1, 3, and 5 is reversed.

REVERSED

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