

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte GARY W. GROVES, KARL KAZMIRSKI,
DAVID L. STEED and MICHAEL L. ZEBOLSKY

Appeal No. 2004-0610
Application No. 09/624,120

ON BRIEF

Before COHEN, NASE, and BAHR, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 20, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to a hydraulic damper or shock absorber adapted for use in a suspension system such as the suspension systems used for automotive vehicles. More particularly, the present invention relates to a hydraulic damper or shock absorber having a continuously variable damping characteristic which is adjustable by a solenoid actuated continuously variable servo valve to vary the damping characteristics between a relatively low level of damping for a soft ride for comfort and a relatively high level of damping for a firm ride for handling (specification, p. 1). A copy of the dependent claims under appeal is set forth in the appendix to the appellants' brief. Claim 1, the only independent claim on appeal, reads as follows:

An adjustable shock absorber comprising:
a pressure tube defining a working chamber;
a piston rod extending through said pressure tube and into said working chamber;
a valveless piston slidably disposed within said pressure tube and connected to said piston, said piston dividing said working chamber into an upper working chamber and a lower working chamber;
a valve assembly separate from said piston in communication with said upper and lower working chambers, said valve assembly including a first variable orifice disposed in a first fluid path extending directly between said upper working chamber and said lower working chamber for controlling flow from said upper working chamber to said lower working chamber and a second variable orifice disposed in a second fluid path extending directly between said lower working chamber and said upper working chamber for controlling flow from said lower working chamber to said upper working chamber, said second fluid path being separate from said first fluid path.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Fukumura et al. (Fukumura)	4,921,224	May 1, 1990
Wilke	5,588,510	Dec. 31, 1996
Danek	5,873,437	Feb. 23, 1999

Claims 1 to 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wilke in view of Danek.

Claims 19 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wilke in view of Danek as applied to claim 18 above, and further in view of Fukumura.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the first Office action (Paper No. 3, mailed July 27, 2001), the final rejection (Paper No. 5, mailed May 10, 2002) and the answer (Paper No. 12, mailed June 19, 2003) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 11, filed December 13, 2002) and reply brief (Paper No. 13, filed August 22, 2003) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1 to 20 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

In the rejection of claims 1 to 18 (final rejection, p. 3), the examiner (1) ascertained that Wilke discloses the claimed subject matter except for the valveless piston; and (2) concluded that it would have been obvious to one of ordinary skill in the

art to have utilized a valveless piston in the shock absorber of Wilke in view of Danek's teaching of a shock absorber having a valveless piston as a mere elimination of a part and its associated function.

The appellants argue throughout both briefs that the applied prior art does not suggest modifying Wilke's shock absorber to utilize a valveless piston. We agree.

Wilke's piston 3 is provided with a piston check valve 15 which permits fluid to flow from the second working chamber 12 through the piston check valve 15 and into the first working chamber 11, but does not permit fluid to flow in the opposite direction. The lower capped end 14 of the housing 2 includes an end check valve 16 which permits fluid to flow from the reservoir 9 to the second working chamber 12, but does not permit flow in the opposite direction. There is a first transfer passage 17 which establishes fluid communication between the twin valve assembly 5 and the first working chamber 11 via the conduit 10 defined between the inner 8 and the medial 7 cylinders. There is a second transfer passage 18 which allows fluid flow between the twin valve assembly 5 and the second working chamber 12. A reservoir passage 19 provides for fluid flow from the twin valve assembly 5 to the reservoir 9. Wilke teaches (column 5, lines 25-38) that:

In a compression, the increased pressure in the second working chamber 12 and the decreased pressure in the first working chamber 11 causes the fluid

to flow through the second transfer passage 18 into the twin valve assembly 5 and (as will be described below) thence to the reservoir 9. Fluid can also flow from the second working chamber 12 into the first working chamber 11 through the piston check valve 15. In a rebound motion, the increased pressure in the first working chamber 11 causes fluid to flow through the first transfer passage 17 into the twin valve assembly 5 and thence to the reservoir 9. The reduced pressure in the second working chamber 12 draws fluid from the reservoir 9 through the end check valve 16 and into the second working chamber 12.

In our view, the mere fact that Danek teaches a shock absorber having a valveless piston provides no teaching, suggestion or motivation to a person of ordinary skill in the art at the time the invention was made to have eliminated Wilke's piston check valve 15 and its associated function. In that regard, Wilke's piston check valve 15 is necessary, as set forth above, for a proper functioning of his shock absorber. In our opinion, the only suggestion for modifying Wilke in the manner proposed by the examiner to arrive at the claimed subject matter stems from hindsight knowledge derived from the appellants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

For the reasons set forth above, the decision of the examiner to reject claims 1 to 18 under 35 U.S.C. § 103 is reversed.

We have also reviewed the reference to Fukumura additionally applied in the rejection of claims 19 and 20 but find nothing therein which makes up for the deficiencies of Wilke and Danek discussed above. Accordingly, the decision of the examiner to reject claims 19 and 20 under 35 U.S.C. § 103 is also reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 20 under 35 U.S.C. § 103 is reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	
)	
)	BOARD OF PATENT
JEFFREY V. NASE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
JENNIFER D. BAHR)	
Administrative Patent Judge)	

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