

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GARY L. JOHNSTON, JAMES W. ZEHNDER II,
WILLIAM C. KRUCKEMEYER and MICHAEL L. OLIVER

Appeal No. 96-3156
Application 08/304,333¹

ON BRIEF

Before ABRAMS, STAAB and McQUADE, *Administrative Patent Judges*.
STAAB, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 4-12, all the claims pending in the application. Two amendments have been filed subsequent to the final rejection. The first (Paper No. 15), submitted February 22, 1996, has not been entered, while the second (Paper No. 24), submitted November

¹ Application for patent filed September 12, 1994.

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5, 1996, has been entered. See page 2 of the supplemental examiner's answer (Paper No. 25).

THE INVENTION

Appellants' invention pertains to a fluid brake system for vehicles. As explained on page 2-3 of the brief (Paper No. 13):

Appellants' invention provides a brake system (10) that enables using only one solenoid valve per control wheel brake (Fig. 1). The invention provides a first mode for default base brake operation that provides a direct connection between the unboosted master cylinder (22) and the wheel brakes (12, 14, 16, 18). The invention provides a second mode for all power brake operation that maintains an open flow path between master cylinder (22) and an artificial pedal feel device (30, 32) while automatically modulating braking pressure at each wheel brake independently through the use of an individual valve (52, 54, 56, 58) per wheel. Each valve is responsive to pressurization of the system through manual actuation of the master cylinder and additionally, to electronic control in response to wheel sensor readings falling within various preprogrammed events.

The operation of appellants' invention is further explained on pages 3-5 of the brief.

THE CLAIMS

Independent claim 4, a copy of which is appended to appellants' brief, is representative of the appealed subject matter.

Independent claims 4 and 10 define a brake system that includes a valve which in one mode or position provides fluid

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communication between the master cylinder and the brake, and in a second mode or position provides modulation of fluid pressure at the wheel brake while providing a constantly open fluid communication channel between the master cylinder and the artificial pedal feel device. Independent claim 7 is similar except that in the second position, the valve provides modulation of fluid pressure at the wheel brake while the master cylinder is out of communication with the brake.

THE REFERENCES

The references of record relied upon by the examiner in support of a rejection under 35 U.S.C. § 103 are:

Arikawa	5,141,296	Aug. 25, 1992
Steiner et al. (British Patent Document)	2,252,373	Jun. 5, 1992

With reference to Figure 1, Steiner, the examiner's primary reference, pertains to a fluid brake system similar to appellants' system in that in a first default mode the system operates to provide for unboosted operation of the wheel brakes (14, 16, 17, 18) by a master cylinder (13), and in a second mode the system operates to provide for power brake operation of the wheel brakes. In the unboosted first mode, function control valve (39) is positioned in the illustrated left hand or "O"

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position, whereby master cylinder line (36) is connected to line (36'), which communicates with, for example, wheel brake (17) via ABS system (12) and line (36''). In the powered second mode, function control valve (39) is positioned in the non-illustrated right hand or "II" position, whereby the master cylinder is maintained in open flow communication with buffer reservoir (42) (which appears to be equivalent to appellants' artificial pedal feel device), while pressure to the wheel brake is modulated by brake pressure control valve (47) under the control of energizing solenoid (64). In particular, depending upon the position of the brake pressure control valve (47) amongst the "II", "O" and "I" positions, the pressure modulator (44) is placed, respectively, in fluid communication with pressure source (48) to pressurize the modulator, unpressurized storage reservoir (49) to vent the modulator, or blocked from communicating with either to hold the pressure of the modulator. The pressure condition of the pressure modulator (44) is in turn relayed to the wheel brake via line (36'), ABS system (12) and line (36'') to modulate brake pressure.

Arikawa also pertains to a fluid brake system for a vehicle. The brake system of Arikawa includes, inter alia, a three-port three position valve (36, 37, 47, 48) provided at each wheel

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brake. The teaching of Arikawa upon which the examiner relies is found at column 9, lines 62-66 and reads as follows: "In the above embodiment, the one three-port three position valve [36, etc.] is provided for the one wheel brake apparatus. Alternatively, two two-port two-position valves or an inlet valve and an outlet valve may be used for the one wheel brake."

THE REJECTION

Claims 4-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Steiner in view of Arikawa.

In rejecting the appealed claims under 35 U.S.C. § 103, the examiner has taken the position that the valves (39) and (42) of Steiner function in basically the same way as appellants' integral control and isolation valve (e.g., valve 58). From this starting point, the examiner proceeds as follows:

Steiner et al fail to teach the use of a single "integral control and isolation valve" in place of valves 39 and 47. Arikawa teaches the well known substitution of a single valve for two separate valve[s] in an antilock/traction control brake system (col. 9, lines 62-66). One of ordinary skill in the art at the time of the invention would have found it obvious to provide the brake system of Steiner et al with a single "integral control and isolation valve" in place of the valves 39 and 47, in view of the teaching of Arikawa, as such would provide the same fluid connections while reducing manufacture cost and assembly time by reducing the number of components. [answer (Paper No. 14)), page 5]

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Further insight into the examiner's position is gleaned from the following statement, offered in response to appellants' argument:

One of ordinary skill [would] have known to provide the combined valve of Steiner et al with a range of position[s] which provide communication between the master cylinder and the artificial pedal feel device so as to allow the communication of the brake to be modulated. The ordinary level of skill in the art is far beyond merely attaching the two valves of Steiner together as suggested by appellant [sic, appellants] on page 17 of the brief. One of ordinary skill in the art would know that the appropriate port connection must be maintained so as not to destroy the functions of Steiner et al. [answer, page 9]

OPINION

Our court of review has repeatedly cautioned against employing hindsight by using appellant' disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings of the prior art. *See, e.g., Grain Processing Corp. v. American-Maize Products Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). That court has also cautioned against focusing on the obviousness of the differences between the claimed invention and the prior art rather than on the obviousness of the claimed invention as a whole as § 103 requires. *See, e.g., Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1383, 231 USPQ 81, 93 (Fed. Cir. 1986), *cert. denied*, 480 USPQ 947 (1987).

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In the present instance, for the reasons that follow, we think that the examiner has lost sight of the claimed invention as a whole and has improperly focused upon the supposed obviousness of the differences between the claimed invention and the prior art cited against the claims.

First, we do not agree with the examiner's determination that the valves (39, 47) of Steiner are simultaneously actuated (answer, page 5). As is made clear by Steiner on page 26, lines 8-20, and as aptly pointed out by appellants on page 16 of the brief, valves (39) and (47) of Steiner act independently to achieve their function. This circumstance teaches away from replacing Steiner's valves (39) and (47) with a single valve. Second, the complexity of the Steiner system would require a complete reworking thereof with no guidance from the cited references as to how this is to be accomplished in order to bring about the examiner's proposed modification. The mere fact that Arikawa teaches generally that two smaller valves may be replaced by a single valve is not sufficient in this regard, and it is improper to rely on the ordinary level of skill in the art to make up for the deficiencies of Steiner and Arikawa in this respect. Third, assuming that Steiner's valves (39) and (47) could be replaced by a single valve, it is not clear that the

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claimed system would result in the absence of the guidance provided by appellants' disclosure. Finally, it is not clear why one of ordinary skill in the art would be motivated to modify Steiner in the manner proposed by the examiner. In this respect, appellants' argument on page 34 of the brief to the effect that replacing Steiner's valves (39) and (47) with a single multi-function valve would not necessarily reduce manufacturing costs and assembly time is well taken.

In light of the foregoing, we shall not sustain the standing § 103 rejection.

The decision of the examiner is reversed.

REVERSED

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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LAWRENCE J. STAAB)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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)	
)	
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