Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte KIP ALAN EWING, GERARD EDWARD BAKER,
BRUCE FREDERICK PEASE and JEFFREY D. RUPP

Appeal No. 2002-1620
Application No. 09/504,416

ON BRIEF

Before COHEN, ABRAMS, and NASE, 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 AFFIRM-IN-PART.

BACKGROUND

The appellants' invention relates to a pedal assembly, such as a brake pedal assembly, that is releasable from an operative condition upon imposition of a frontal load to an automotive vehicle (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

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

Gautier et al. (Gautier)	5,737,919	Apr. 14, 1998
Bauer et al. (Bauer)	5,927,821	July 27, 1999

Claims 1 to 5, 8 to 13 and 16 to 19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bauer.

Claims 6, 7, 14, 15 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bauer in view of Gautier.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the final rejection (Paper No. 5, mailed June 11, 2001) and the answer (Paper No. 8, mailed

October 23, 2001) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 7, filed September 4, 2001) and reply brief (Paper No. 9, filed December 27, 2001) 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. As a consequence of our review, we make the determinations which follow.

The anticipation rejection

We sustain the rejection of claims 1 to 5, 8 to 13 and 16 to 19 under 35 U.S.C. § 102(b).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in Kalman

v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it."

In accordance with 37 CFR § 1.192(c)(7), we have selected claim 1 as the representative claim from the appellants' grouping of claims 1 to 5, 8 to 13 and 16 to 19 to decide the appeal on this rejection under 35 U.S.C. § 102(b). See page 3 of the appellants' brief.

Claim 1 reads as follows:

> A releasable pedal system for an automotive vehicle, said system comprising:
> a pedal assembly including a pedal pad operatively engageable by a vehicle operator;
> an actuator assembly for generating an amount of pressurized fluid responsive to the pedal assembly; and
> a pressure release valve coupled in fluid communication with the pressurized fluid and operable to release pressurized fluid to a fluid supply reservoir so as to reduce the amount of pressurized fluid in response to detecting a vehicle collision.

Bauer's invention relates to a hydraulic automotive vehicle brake system with an actuating assembly that is attached to the splashboard of the automotive vehicle and is operable by the vehicle brake pedal. In order to reduce the possibility of risk to the

driver during a collision (especially a rear end collision), Bauer's invention provides a system which simulates an increase volume requirement of the brake system, thus permitting increased actuating travel of the actuating assembly.

In the embodiment of Bauer's brake system shown in Figures 4 and 5, an ABS pressure modulator 40 is interposed between the master brake cylinder 2 and the individual wheel brakes 18, 19, 20, 21 to permit a modulation of the pressures prevailing in the wheel brakes 18 to 21 during ABS control operations. The ABS pressure modulator 40 has a hydraulic motor-and-pump assembly 41 which comprises a first pump 43 associated with the wheel brakes 18, 19, a second pump 44 associated with the wheel brakes 20, 21 and an electric motor 42 which drives both pumps 43, 44. Hydraulic lines 45, 46 lead from the pressure side of the pumps 43, 44 to the wheel brake pairs 18, 19 and 20, 21, respectively.

Lines 45, 46 are connected with the pressure chambers of the master brake cylinder 2 by way of lines 10, 11 and include, in parallel connection, associated with the wheel brakes 18 to 21, each one preferably normally open, electromagnetically operable inlet valve 47, 48, 53, 54, respectively, with each one non-return valve 49, 50, 55, 56. Further hydraulic lines 69, 71 are connected to the individual wheel brake pairs 18, 19 and 20, 21, respectively, to permit a connection between the wheel brake pairs

18, 19 and 20, 21, respectively, with each one low-pressure accumulator 67 or 68, respectively, by the intermediary of electromagnetically operable, preferably normally closed outlet valves 51, 52, 57, 58, respectively.

Low-pressure accumulators 67, 68 are connected to the suction side of the associated pump 43 or 44, respectively. The wheel brake pairs 18, 19 or 20, 21, respectively, which, for example, can be associated with a vehicle axle each (black-white brake circuit split-up) are associated with wheel sensors 63, 64, 65, 66, the output signals of which are supplied to an electronic control unit 59 by way of signal lines (not shown). During ABS control operations, control unit 59 produces control or change-over signals both for the inlet valves 47, 48, 53, 54 and the outlet valves 51, 52, 57, 58. In addition, the output signal of an acceleration sensor 62, which can be activated in an accident, is conducted to the electronic control unit 59. The acceleration sensor 62 takes the form of an airbag sensor serving to trigger the airbag 61 in the embodiment shown.

In the basic or inactive position of the brake system shown in Figure 4 of Bauer, hydraulic pressure may develop in the wheel brakes 18 to 21 by way of the normally open inlet valves 47, 48, 53, 54. In a frontal impact or a crash which is sensed by the acceleration or airbag sensor 62, the electronic control unit 59 produces change-over

signals for the normally closed outlet valves 51, 52, 57, 58 which open the connections 69, 71 leading to the low-pressure accumulators 67, 68 so that the pressure fluid volume discharged from the master brake cylinder 2 propagates into the low-pressure accumulators 67, 68. The operating condition of the brake system is shown in Figure 5.

The appellants argue (brief, pp. 5-6; reply brief, pp. 1-2) that the anticipation rejection of claim 1 is in error since Bauer does not disclose a releasable pedal system for an automotive vehicle which includes a pressure release valve operable to release pressurized fluid to a fluid supply reservoir so as to reduce the amount of pressurized fluid in response to detecting a vehicle collision. Specifically, the appellants point out that (1) the fluid supply reservoir, as described in the specification, is clearly associated with the actuator assembly for supplying fluid thereto, and (2) Bauer fails to teach or even suggest releasing pressurized fluid to a fluid supply reservoir for use in a pedal system such that the fluid can be reused.

The argument presented by the appellants does not convince us that the subject matter of claim 1 is novel. In our view, Bauer does disclose a releasable pedal system for an automotive vehicle which includes a pressure release valve operable to release pressurized fluid to a fluid supply reservoir so as to reduce the amount of pressurized

fluid in response to detecting a vehicle collision. In our view, the claimed language that the releasable pedal system includes a pressure release valve operable to release pressurized fluid to a fluid supply reservoir so as to reduce the amount of pressurized fluid in response to detecting a vehicle collision is clearly readable on Bauer's outlet valves 51, 52, 57, 58 which open the connections 69, 71 leading to the low-pressure accumulators 67, 68 so that the pressure fluid volume discharged from the master brake cylinder 2 propagates into the low-pressure accumulators 67, 68 upon a crash sensed by airbag sensor 62. Thus, the claimed pressure release valve operable to release pressurized fluid is readable on Bauer's outlet valves 51, 52, 57, 58 and the claimed fluid supply reservoir is readable on Bauer's low-pressure accumulators 67, 68. In that regard, Bauer's low-pressure accumulators 67, 68 do supply fluid to the brake system when the brake system reverts from the position depicted in Figure 5 wherein the low-pressure accumulators 67, 68 are filled with fluid to the position depicted in Figure 4 wherein the low-pressure accumulators 67, 68 are not filled with fluid.[1]

With regard to the appellants' argument to the effect that Bauer's low-pressure accumulators 67, 68 do not recirculate the fluid back to the pressure fluid supply reservoir 5 (identified in Figure 1 of Bauer), we note that such a feature is not recited in

[1] We note that the claimed fluid supply reservoir is not readable on pressure fluid receivers 16, 17 shown in Figure 1 of Bauer or the accumulator chambers 26, 27 shown in Figures 2 and 3 of Bauer since these receivers/chambers do not supply fluid to the brake system, rather they remove fluid therefrom.

claim 1. Features not claimed cannot be relied on to establish patentability. See In re Self, 671 F.2d 1344, 1348, 213 USPQ 1, 7 (CCPA 1982).

For the reasons set forth above, the decision of the examiner to reject claim 1 under 35 U.S.C. § 102(b) is affirmed. As set forth above, the appellants have grouped claims 1 to 5, 8 to 13 and 16 to 19 as standing or falling together. Thereby, in accordance with 37 CFR § 1.192(c)(7), claims 2 to 5, 8 to 13 and 16 to 19 fall with claim 1. Thus, it follows that the decision of the examiner to reject claims 2 to 5, 8 to 13 and 16 to 19 under 35 U.S.C. § 102(b) is also affirmed.

The obviousness rejection

We will not sustain the rejection of claims 6, 7, 14, 15 and 20 under 35 U.S.C. § 103.

The test for obviousness is what the combined teachings of the references would have suggested to one 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).

Gautier discloses a master cylinder having a body 4 pierced with a bore 5 closed on a first side by an end 6 and on a second side by a piston 7. The piston 7 slides in the bore 5 to delimit a pressure chamber 8. The pressure chamber 8 is connected by a pressure pipe 12 to at least one brake motor through an outlet 11 therein. The chamber 8 and the pressure pipe 12 together delimit a working volume filled with a hydraulic fluid. The working volume is partially delimited by a leak-off device 19 which is responsive to an impact to selectively allow hydraulic fluid to leak off toward the outside of the working volume. Gautier teaches (column 2, lines 46-48) that it is advantageous for the closure piece of the leak-off device to be urged into a position of rest by a spring 20, in which position it fulfils its closure function as shown in Figures 2, 3 and 4.

In the rejection under 35 U.S.C. § 103, the examiner determined (final rejection, p. 3) that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a spring in the housing of Bauer as taught by Gautier in order to prevent operation of the device in a non-collision situation.

The appellants argue that the applied prior art does not suggest the claimed subject matter. We agree.

Claims 6, 7, 14, 15 and 20 require in one way or another the pressure release valve (i.e., Bauer's valves 51, 52, 57, 58) to include a spring biasing an inertial mass. However, this limitation is not suggested by the applied prior art. In that regard, one skilled in that art would have understood Bauer's valves 51, 52, 57, 58 to be solenoid actuated as depicted in Figures 4 and 5. As such there is no need to provide a spring to prevent operation of the device in a non-collision situation since the solenoids already prevent operation of the device in a non-collision situation. In our view, the only suggestion for modifying Bauer in the manner proposed by the examiner to meet the above-noted limitation 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). It follows that the decision of the examiner to reject claims 6, 7, 14, 15 and 20 under 35 U.S.C. § 103 is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 5, 8 to 13 and 16 to 19 under 35 U.S.C. § 102(b) is affirmed and the decision of the examiner to reject claims 6, 7, 14, 15 and 20 under 35 U.S.C. § 103 is reversed.

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

AFFIRMED-IN-PART

IRWIN CHARLES COHEN Administrative Patent Judge	)
NEAL E. ABRAMS Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
JEFFREY V. NASE Administrative Patent Judge	)

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