UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL HEATON and WILLIAM P. BUCKNER

Appeal 2008-0183
Application 09/915,805
Technology Center 3600

Decided: April 14, 2008

Before TERRY J. OWENS, DAVID B. WALKER, and MICHAEL W. O'NEILL, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal from a rejection of claims 16-22, which are all of the pending claims.

THE INVENTION

The Appellants claim a vehicle driveline parking brake assembly. Claim 16 is illustrative:

16. A vehicle driveline parking brake assembly, comprising:

a moveable driveline component;

a stationary driveline component that remains stationary relative to a portion of a vehicle;

a braking member associated with the moveable driveline component such that the braking member remains stationary relative to the moveable driveline component;

an engaging portion associated with the stationary driveline component, the engaging portion is selectively moveable into a braking position where the engaging portion engages the braking member;

a spring that biases the engaging portion into the braking position;

an electrically powered actuator having a portion that engages the spring and selectively moves the spring and releases the engaging portion out of the braking position; and

the moveable driveline component comprises a driveline shaft and the braking member comprises a drum that is fixed for rotation on the driveline shaft, and that is rotatable relative to the stationary driveline component.

THE REFERENCES

Laxhuber	WO 01-05638 A1	Jan. 25, 2001
Messersmith	US 6,428,117 B1	Aug. 6, 2002

THE REJECTIONS

Claims 16-22 stand rejected as follows: under 35 U.S.C. § 102(b) over Messersmith, and under 35 U.S.C. § 103 over Laxhuber in view of Messersmith.[1]

OPINION

[1] Although the Examiner states that claims 16-21 are rejected under 35 U.S.C. § 102(b), the Examiner discusses claims 16-22 (Ans. 5-8). Thus, we consider the Examiner's omission of claim 22 from the statement of the rejection to be inadvertent.

We reverse the rejection under 35 U.S.C. § 102(b), affirm the rejection under 35 U.S.C. § 103 as to claims 16, 17 and 19-22, and reverse the rejection under 35 U.S.C. § 103 as to claim 18.

Rejection under 35 U.S.C. § 102(b)

The Examiner has the initial burden of establishing a prima facie case of anticipation by pointing out where all of the claim limitations appear in a single reference. *See In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990); *In re King*, 801 F.2d 1324, 1327 (Fed. Cir. 1986).

Each of the Appellants' independent claims (16, 18, 19, 20 and 21) requires an electrically powered actuator having a portion that engages a spring that biases into the braking position an engaging portion associated with a stationary driveline component.

Messersmith discloses a vehicle parking brake system (10) that is independent of the vehicle's service brakes (col. 3, ll. 25-27). Parking brake system 10 includes an actuator assembly (12) connected by a linkage (14) to a parking brake (16) associated with a drum (15) secured to a vehicle drive train shaft (17) (col. 3, ll. 25-30). Actuator assembly 12 has a spring (20) which is acted upon by a piston (21) to supply a force through linkage 14 to move friction members into engagement with drum 15 to mechanically apply parking brake 16 (col. 3, ll. 32-37). A hydraulic arrangement (22) includes a housing (24) with a bore (26) therein for retaining a plunger (28) of a solenoid valve (30) (col. 3, ll. 52-54). In a first position shown in figure 1, plunger 28 permits flow of pressurized fluid from a chamber (23) on the side of piston 21 opposite spring 20 to an atmospheric pressure reservoir (41), thus enabling spring 20 to expand and thereby move linkage 14 such that friction linings of parking brake 16 move into engagement with drum 15

to apply parking brake 16 (col. 3, l. 66 – col. 4, l. 7). In a second position shown in figure 2, plunger 28 permits flow of pressurized fluid from an accumulator (34) to chamber 23 (col. 4, ll. 8-15). The pressurized fluid acts on piston 21 to compress spring 20 and thereby move linkage 14 such that friction linings are moved out of engagement with drum 15, thus releasing parking brake 16 and permitting drive train shaft 17 to rotate (col. 4, ll. 15-20).

The Examiner argues that Messersmith discloses "an electrically powered actuator ([motor driven pump] 40) having a portion (fluid) that engages the spring" (Ans. 5).

It is Messersmith's piston 21, not the pressurized fluid, that engages spring 20 (figs. 1, 2). Hence, Messersmith's pressurized fluid does not correspond to the Appellants' "portion that engages the spring".

The Examiner, therefore, has not established a prima facie case of anticipation of the inventions claimed in the Appellants' claims 16-22.

Rejection under 35 U.S.C. § 103

Claims 16, 17, 20 and 21

Laxhuber's figure 1 "shows a spring-type accumulator **1** with a first housing section **3** that holds a spring **5**, which exerts a force on a braking system (not shown here) by way of a plunger **7** in order to brake a vehicle" (p. 8). Spring-type accumulator 1 includes a ball screw spindle (11) for moving plunger 7, and is driven by an electric motor (29) therein (pp. 8-9; fig. 1). Laxhuber states that "[t]he object of the invention is to create a monitoring device (especially one that operates electronically), as well as a monitoring method, by which malfunctions can already be detected in an early stage so that service or repair measures can be initiated before a

detectable negative effect of the brake application device occurs or even a failure of the spring-type accumulator" (p. 4).

The Appellants argue that Laxhuber appears to be directed toward a wheel brake arrangement rather than a driveline parking brake arrangement (Br. 9-10).

Laxhuber discloses that "[i]n lighter vehicles, a parking brake effect is achieved mainly by a cable mechanism alone. The driver operates a lever at one end of which a cable is fastened that exercises a braking force, usually on two wheels of the vehicle" (p. 2). Laxhuber also discloses that "[s]pring-type accumulators are used mainly for operating parking brakes in the commercial vehicle area, in which the required manual force for operating a cable brake can no longer be applied by the driver", *see id*., and that a cable (33) actuates a mechanical releasing device (35) in his spring-type accumulator 1 (p. 9; fig. 1). Laxhuber, however, does not indicate that the disclosed spring-type accumulator 1 is limited to wheel brakes. One of ordinary skill in the art, through no more than ordinary creativity, would have considered Laxhuber's plunger 7 to be suitable for performing the function of Messersmith's linkage 14. *See KSR Int'l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007) (In making the obviousness determination one "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ").

The Appellants argue that "[t]he *Laxhuber* device is used for a wheel brake, therefore, combining it with a driveline shaft, drum or both as shown in *Messersmith* will not provide any useful result" (Br. 9).

As pointed out above, Laxhuber does not disclose that spring-type accumulator 1 is limited to a wheel brake. One of ordinary skill in the art

would have been led by Laxhuber to use the disclosed spring-type accumulator 1 with plunger 7 as an alternative to Messersmith's hydraulic system with linkage 14 to move Messersmith's friction linings into and out of engagement with drum 15 of driveline parking brake system 10. As stated by the Supreme Court in *KSR*, 127 S.Ct. 1727, "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *KSR*, 127 S.Ct. at 1740.

For the above reasons we are not convinced of reversible error in the rejection under 35 U.S.C. § 103 of claims 16, 17, 20 and 21.

Claims 19 and 22

Independent claim 19 requires "an engaging portion associated with the stationary driveline component, the engaging portion is selectively moveable into a braking position where the engaging portion engages the braking member", and requires that "the stationary driveline component comprises an axle assembly and the engaging portion is at least partially supported on the axle assembly such that when the engaging portion moves into the braking position, the braking member remains stationary relative to the axle assembly". Claim 22, which depends from claim 19, requires that "the stationary driveline component comprises a housing of the axle assembly."

The Appellants argue that there is no suggestion in the applied references to incorporate components with an axle assembly (Br. 10; Reply Br. 2).

The Appellants' claims 19 and 22 do not require that the engaging

portion is at least partially supported directly on the axle assembly. The Examiner finds that braking components, along with all other components of a vehicle, necessarily are supported on the axle assembly (Ans. 7-8). Because that finding is reasonable and has not been specifically challenged by the Appellants, we accept it as fact. *See In re Kunzmann*, 326 F.2d 424, 425 n.3 (CCPA 1964).

We therefore are not persuaded of reversible error in the rejection under 35 U.S.C. § 103 of claims 19 and 22.

Claim 18

Independent claim 18 requires "an engaging portion associated with the stationary driveline component, the engaging portion is selectively moveable into a braking position where the engaging portion engages the braking member", and requires that "the stationary driveline component comprises a transmission housing and the engaging portion is at least partially supported on the transmission housing such that when the engaging portion moves into the braking position, the braking member and the associated moveable driveline component do not move relative to the transmission housing."

The Examiner argues that "[w]ith respect to the component being supported by the transmission housing, brake 16 of Messersmith comprises the same drive shaft 17 of the instant invention and therefore, it would be necessary for the brake to be 'partially supported on the transmission' in order to be able to actuate the brake for the drive shaft 17" (Ans. 8).

It is not necessary for Messersmith's brake to be at least partially supported on the transmission housing for the brake to be actuated. For example, the brake could be supported on the axle assembly independently

of the transmission housing. The Examiner has not provided a convincing reason as to why the applied references would have led one of ordinary skill in the art to at least partially support Messersmith's brake on the transmission housing.

The Examiner, therefore, has not established a prima facie case of obviousness of the invention claimed in the Appellants' claim 18.

DECISION

The rejection of claims 16-22 under 35 U.S.C. § 102(b) over Messersmith is reversed. The rejection of claims 16-22 under 35 U.S.C. § 103 over Laxhuber in view of Messersmith is affirmed as to claims 16, 17 and 19-22, and reversed as to claim 18.

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

AFFIRMED-IN-PART

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CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009