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EXAMINER
LANE, NICHOLAS J

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GUY WIESEN, THORSTEN ALAN GREIS,
ROBERT BESCH, THIERRY BLEES,
MARC BERNARD PETER FAYMONVILLE, and
DAVID LLORENTE GARCIA

Appeal 2019-001952
Application 15/169,810
Technology Center 3600

Before DANIEL S. SONG, WILLIAM A. CAPP and
BRENT M. DOUGAL, *Administrative Patent Judges*.

CAPP, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] seeks our review under 35 U.S.C. § 134(a) of the final rejection of claims 1, 8, and 15. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "Applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies The Goodyear Tire & Rubber Company as the Applicant and real party in interest. Appeal Br. 3.

THE INVENTION

Appellant's invention relates to automotive braking systems. Spec. ¶ 1. Claim 1, reproduced below, is illustrative of the subject matter on appeal.

> 1. A brake system for performing a repeatable brake operation of a vehicle comprising:
>
> a main unit having an electrical power circuit, a micro programmable logic controller, an air compressor, a compressed air tank, a pressure regulator, a solenoid valve, and a pneumatic control circuit;
>
> a driver control box for controlling the system;
>
> a pneumatic cylinder for performing the repeatable brake operation, the pneumatic cylinder being attached to a brake pedal;
>
> a safety brake pedal for pivoting a tip of the brake pedal backward to avoid squeezing of a driver's foot when the pneumatic cylinder pushes the brake pedal forward; and
>
> a lightgate for triggering the repeatable brake operation.

THE REJECTIONS

The Examiner relies upon the following as evidence in support of the rejections:

NAME	REFERENCE	DATE
Miele	US 4,964,485	Oct. 23, 1990
Jacobson	EP 0 854 071 A1	July 22, 1998
Thomas	US 2005/0031056 Al	Feb. 10, 2005
Ward	US 2016/0114771 Al	Apr. 28, 2016

The following rejections are before us for review:

1. Claims 1 and 8 are rejected under 35 U.S.C. § 103 as being unpatentable over Miele, Thomas, and Jacobson.

3. Claim 15 is rejected under 35 U.S.C. § 103 as being unpatentable over Miele, Thomas, Ward, and Jacobson.

OPINION

Unpatentability of Claims 1 and 8 over Miele, Thomas, and Jacobson

Claim 1

The Examiner finds that Miele discloses the invention substantially as claimed except for the logic controller and pivoting brake pedal, for which the Examiner relies on Thomas and Jacobson respectively. Final Action 5. The Examiner concludes that it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Miele by the teachings of Thomas and Jacobson to achieve the claimed invention. *Id*. According to the Examiner, a person of ordinary skill in the art would have done this to provide a means for monitoring brake actuation and to prevent injury. *Id.*

Appellant argues that the applied art fails to disclose a "programmable logic controller" as part of a "main unit." Appeal Br. 5. This argument is not persuasive. Thomas is directed to a dual signal correlation system for a brake system. Thomas ¶ 19. Thomas's system features a standard loop feedback system that feeds a force command 12 into controller 14 which, in turn, provides outputs to actuator 16. *Id.* ¶ 18, Fig. 1. Thus, Thomas satisfies the programmable logic controller limitation of claim 1. *Id.*

With the respect to the "main unit" limitation of claim 1, the Examiner notes, correctly, that neither the Specification nor the claim language provides an operational definition for the term "main unit." Ans. 4. The Examiner further notes, again correctly, that neither the Specification nor the claims require that the components of the main unit be located together or to reside in a common housing. *Id.*

Appellant's drawings depict a brake system 400 that includes main unit 410 containing electrical power circuits 420, controller 430, air compressor 440, compressed air tank 450, pressure regulator 460, solenoid valve 470, and pneumatic control circuit 480. Spec. 36, Fig. 4. The foregoing components, according to the Specification, "may" be contained in an aluminum housing. Similarly, main unit 410 "may" be installed in a vehicle trunk. *Id.* Main unit 410 is depicted in schematic form. Fig. 4. Inasmuch as there is no "housing" limitation in claim 1 and the Specification merely discloses that the main unit "may" be contained in a housing, we are not inclined to read a "housing" limitation into the claim. *Arlington Indus., Inc. v. Bridgeport Fittings, Inc*., 345 F.3d 1318, 1327 (Fed. Cir. 2003) (explaining that it is improper to read a limitation from the specification into the claims).

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Am. Acad. of Sci. Tech Ctr*., 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under the broadest reasonable interpretation standard, claim terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc*., 504 F.3d 1249, 1257 (Fed. Cir. 2007). Construing claims broadly during prosecution is not unfair to the applicant, because the applicant has the opportunity to amend the claims to obtain more precise claim coverage. *In re Am. Acad. of Sci. Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2012).

Thomas, as with Appellant's drawings, depicts its system, including controller 14, in schematic form. Thomas Figs. 1, 2. Using a broad, but reasonable, construction of "main unit," we agree with the Examiner that

Thomas exhibits a "main unit" having a "micro programmable logic controller" within the meaning of claim 1. Final Action 5, Ans. 3–4.

Next, Appellant argues that the Examiner provides no factual basis or rational underpinning to support a legal conclusion of obviousness. Appeal Br. 5. Appellant further accuses the Examiner of engaging in improper hindsight. *Id.* at 5–6. Appellant further asserts that the technology involved in the invention is "unpredictable." *Id.* at 6. In essence, Appellant argues that the Examiner's proposed combination would not have been made by a person of ordinary skill in the art with a reasonable expectation of success because the results would have been unpredictable. *Id.*

In response, the Examiner points out that the rejection relies on specific passages of Thomas for providing a motivation to modify Miele with a programmable logic controller. Ans. 6. The Examiner notes that Thomas teaches that its control system provides an advantage in monitoring brake actuation. *Id.* The Examiner cites passages in Thomas to support a finding that substituting a digital control system, as in Thomas, for an analog control system, as in Miele, provides predictable results. *Id.* at 7 (citing Thomas ¶ 83).

Appellant's predictability argument is not persuasive. Electro-mechanical systems with digital controllers have become ubiquitous in our modern day technological environment. Merely modifying an existing electro-mechanical system with a digital controller, without more, is predictable and generally obvious. *See e.g., Leapfrog Enters., Inc. v. Fisher–Price, Inc.*, 485 F.3d 1157, 1162 (Fed.Cir.2007) (combination is the adaptation of an old idea or invention using newer technology that is commonly available and understood in the art). Indeed, the Supreme

Court's seminal case on obviousness, *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), involved adding electronic controls to an automotive pedal. Thus, Appellant's reliance on *KSR* to support an unpredictability argument misses the mark. We view Appellant's unpredictability argument as nothing more than unsubstantiated attorney argument that is entitled to little or no weight in an obviousness analysis. *See Invitrogen Corp. v. Clontech Labs, Inc.*, 429 F.3d 1052, 1068 (Fed. Cir. 2005) (maintaining that unsubstantiated attorney argument is no substitute for competent evidence); *see also Estee Lauder, Inc. v. L'Oreal, S.A.*, 129 F.3d 588, 595 (Fed.Cir. 1997) (explaining that attorney argument cannot take the place of evidence in the record).

Next, Appellant argues that the applied art fails to disclose a "safety pedal" as claimed. Appeal Br. 6. In response, the Examiner explains that:

> Miele discloses a cylinder (24) that pushes the brake pedal forward (see FIG. 1) and Jacobson discloses a safety brake pedal for pivoting a tip of the brake pedal backward (see Jacobson, FIG. 2, dashed lines showing safety brake pedal pivoting a tip of the brake pedal). When combined with Miele, the pivoting brake pedal would be capable of avoiding squeezing a driver's foot when the pneumatic brake cylinder pushes the brake pedal since the brake pedal pivots backward. As such, the combination of Jacobson with Miele results in the claimed subject matter.

Ans. 9. We consider the Examiner's findings of fact and technical reasoning on this issue persuasive.

Finally, we find Appellant's hindsight argument unpersuasive. The Examiner has articulated a sufficient rationale to support the rejection. Final Action 5. *See In re Cree, Inc.*, 818 F.3d 694, 702 n.3 (Fed. Cir. 2016) (Explaining that a hindsight argument is of no moment where the Examiner provides a sufficient, non-hindsight reason to combine the references).

We have considered Appellant's remaining arguments and find them to be without merit. In view of the foregoing discussion, we determine the Examiner's findings of fact are supported by a preponderance of the evidence and that the Examiner's legal conclusion of unpatentability is well-founded. Accordingly, we sustain the Examiner's unpatentability rejection of claim 1.

Claim 8[2]

Claim 8 is an independent claim that is substantially similar in scope to claim 1 except that it is a method claim. Claims App. The Examiner finds that Miele discloses the electric eye limitation of claim 8. Ans. 14–15 (citing Thomas col. 8, ll. 27–31).

In traversing the rejection, Appellant relies on the same arguments, presented in substantially *verbatim* form, that we previously considered and found unpersuasive with respect to claim 1 and find equally unpersuasive here. Appeal Br. 7–9.

We sustain the Examiner's rejection of claim 8.

Unpatentability of Claim 15
over Miele, Thomas, Ward, and Jacobson

Claim 15 is an independent claim that is substantially similar in scope to claim 1, except that it also requires a proximity sensor disposed on a clutch pedal. Claims App. The Examiner relies on Ward as disclosing a brake system with a proximity sensor disposed on a clutch pedal as claimed. Final Action 7. The Examiner concludes that it would have been obvious to

[2] Contrary to our rules, Appellant's Appeal Brief fails to provide sub-headings for each claim that is separately argued. We understand that the arguments for claim 8 are set forth on pages 7–9.

a person of ordinary skill in the art at the time of the invention to combine the clutch position sensor of Ward with the device of Miele. *Id*. According to the Examiner, a person of ordinary skill in the art would have done this to allow the brake system to perform a hill hold function for a manual vehicle. *Id*.

In traversing the rejection, Appellant relies on the same arguments, presented in substantially *verbatim* form, that we previously considered and found unpersuasive with respect to claim 1 and find equally unpersuasive here. Appeal Br. 9–12.

Appellant also argues that Ward fails to disclose a proximity sensor as claimed. *Id.* at 10. According to Appellant:

> Fig. 1 of Ward is a schematic representation and . . . merely show[s] the sensor being associated with the clutch, not [that] the proximity sensor is disposed on the clutch pedal

Id. at 11.

In response, the Examiner states that Figure 1 of Ward shows that sensor 46 is coupled to pedal 42. Ans. 12. The Examiner further notes that Ward teaches that the position sensor indicates the current position of the clutch pedal. *Id.* 12–13 citing Ward, ¶ 20. According to the Examiner, a person of ordinary skill in the art would understand from the drawing and the accompanying teaching disclosure in Ward that the sensor is "disposed on" the clutch pedal. *Id.* at 13. We agree.

Appellant also raises a predictability argument with respect to adding Ward to the combination. Appeal Br. 11. This conclusory, unsubstantiated attorney argument lacks merit as with Appellant's other predictability arguments previously discussed. *Invitrogen*, 429 F.3d at 1068; *Estee Lauder*, 129 F.3d at 595.

The Examiner's findings of fact are supported by a preponderance of the evidence and the Examiner's legal conclusion of unpatentability is well-founded. Accordingly, we sustain the Examiner's unpatentability rejection of claim 15.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)	Aff'd	Rev'd
1, 8	103	Miele, Thomas, Jacobson	1, 8	
15	103	Miele, Thomas, Ward, Jacobson	15	
Summary			1, 8, 15	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED