

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte C.W. SINJIN SMITH, CHARLES M. NEWTON,
and RICHARD GASSMAN

Appeal No. 2008-0288
Application No. 10/910,528
Technology Center 1700

Decided: March 27, 2008

Before BRADLEY R. GARRIS, TERRY J. OWENS and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants appeal from a rejection of claims 1-16, which are all of the pending claims.

THE INVENTION

The Appellants claim a microgenerator system for generating electrical power. Claim 1 is illustrative:

1. A micro-generator system for generating electrical power, comprising:
a micro-combustor having a fuel inlet;
a fuel control device connected to said fuel inlet of said micro-combustor,
said fuel control device being effective to alternatively supply hydrocarbon fuel in
vapor form at ambient temperature to said micro-combustor, or hydrocarbon fuel

in liquid form at ambient temperature which is vaporized prior to input to said micro-combustor where it is burned and produces heat;

a thermoelectric module positioned in thermal communication with said micro-combustor, said thermoelectric module being effective to output electrical energy to an energy consuming electronic device; and

a micro-controller coupled to said fuel control device, to said micro-combustor and to said thermoelectric module, said micro-controller being effective to control the supply of fuel from said fuel control device to said micro-combustor, to initiate the combustion of fuel within said micro-combustor and to monitor the output of electrical energy from said thermoelectric module.

THE REFERENCES

Guazzoni	US 4,218,266	Aug. 19, 1980
Elsner	US 5,436,467	Jul. 25, 1995
McAlonan	US 6,410,842 B1	Jun. 25, 2002
Cohen	US 6,613,972 B2	Sep. 2, 2003
Burch	US 2004/0101750 A1	May 27, 2004
Arana	US 6,939,632 B2	Sep. 6, 2005 (filed Aug. 6, 2001)

J. Vican et al. (Vican), "Development of a Microreactor as a Thermal Source for Microelectromechanical Systems Power Generation", 29 *Proc. Combustion Inst.* 909-16 (2002).

"Maxwell Technologies Ultracapacitors" (Maxwell),
<http://web.archive.org/web/20020811075158/http://www.maxwell.com/ultracapacitors/>, 1 page, Aug. 11, 2002.

THE REJECTIONS

The claims stand rejected as follows:

- 1) claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over McAlonan;
- 2) claims 5 and 13 under 35 U.S.C. § 103 over McAlonan in view of Guazzoni;

- 3) claims 7 and 16 under 35 U.S.C. § 103 over McAlonan in view of Maxwell;
- 4) claims 8-10 under 35 U.S.C. § 103 over McAlonan in view of Burch, Elsner and the admitted prior art;
- 5) claim 14 under 35 U.S.C. § 103 over McAlonan in view of Burch;
- 6) claim 15 under 35 U.S.C. § 103 over McAlonan in view of Elsner and the admitted prior art;
- 7) claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Cohen in view of McAlonan;
- 8) claims 5 and 13 under 35 U.S.C. § 103 over Cohen in view of McAlonan and Guazzoni;
- 9) claims 7 and 16 under 35 U.S.C. § 103 over Cohen in view of McAlonan and Maxwell;
- 10) claim 15 under 35 U.S.C. § 103 over Cohen in view of McAlonan and Elsner;
- 11) claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Arana in view of McAlonan;
- 12) claims 5 and 13 under 35 U.S.C. § 103 over Arana in view of McAlonan and Guazzoni;
- 13) claims 7 and 16 under 35 U.S.C. § 103 over Arana in view of McAlonan and Maxwell;
- 14) claims 8-10 under 35 U.S.C. § 103 over Arana in view of McAlonan, Burch and Elsner;
- 15) claim 14 under 35 U.S.C. § 103 over Arana in view of McAlonan and Burch;

- 16) claim 15 under 35 U.S.C. § 103 over Arana in view of McAlonan and Elsner;
- 17) claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Vican in view of McAlonan;
- 18) claims 5 and 13 under 35 U.S.C. § 103 over Vican in view of McAlonan and Guazzoni;
- 19) claims 7 and 16 under 35 U.S.C. § 103 over Vican in view of McAlonan and Maxwell;
- 20) claims 8-10 under 35 U.S.C. § 103 over Vican in view of McAlonan, Burch and Elsner;
- 21) claim 14 under 35 U.S.C. § 103 over Vican in view of McAlonan and Burch;
- 22) claim 15 under 35 U.S.C. § 103 over Vican in view of McAlonan and Elsner;
- 23) claims 1-6 and 8-15 under the doctrine of obviousness-type double patenting over claims 1, 3-6, 8, 10 and 11 of US 7,180,264;¹ and
- 24) claims 1-6 and 8-15 under the doctrine of obviousness-type double patenting over claims 1-6 of US 6,987,329 B1.²

OPINION

¹ Claims 1-6 and 8-15 were rejected provisionally under the doctrine of obviousness-type double patenting over claims 1, 3-6, 8, 10 and 11 of copending application no. 10/910,536 (Ans. 23). Because that application has issued as a patent (US 7,180,264), we treat the rejection as an obviousness-type double patenting rejection over the claims in that patent.

² Claims 1-6 and 8-15 were rejected provisionally under the doctrine of obviousness-type double patenting over claims 1-6 of copending application no. 10/910,736 (Ans. 24). Because that application has issued as a patent (US

We affirm the Examiner's rejections and enter a new ground of rejection of claims 1-16 under 35 U.S.C. § 112, first paragraph, written description requirement.

Rejection #1

McAlonan discloses an automatic burner-driven generator system for generating and maintaining sufficient electric power to reliably and safely drive a low-power load, such as a load below 5 watts, over an extended period of continuous service (col. 1, ll. 12-24). McAlonan gives, as an example of such an application, a remotely located gas pipeline monitoring station (col. 1, ll. 27-29). McAlonan's system includes a fuel fired burner unit (100), a thermoelectric converter unit (200), a rechargeable battery unit (300), a battery charging unit (400) and a controller (500) which preferably includes one or more microprocessor devices and is coupled to the units and programmed for controlling their actuation (col. 5, ll. 11-16; col. 12, ll. 10-14; fig. 5). A fuel source for burner unit 100 provides "a pressurized flow of natural gas, propane, or some other type of fuel which then is ignited within the burner device's combustion chamber" (col. 5, ll. 46-51). Burner unit 100 generates thermal energy that is transferred to thermoelectric converter unit 200 which "transduces this thermal gradient to a first electric power signal that it applies to battery charging unit **400**" (col. 5, ll. 19-26).

The Appellants argue that "McAlonan fails to disclose or suggest a 'micro-generator' or a 'micro-combustor'" (Br. 12). Cohen, the Appellants argue, is incorporated by reference in the Appellants' Specification (Spec. 5:23-24) and discloses (col. 2, ll. 30-34) specific, non-exemplary dimensions

6,987,329 B1), we treat the rejection as an obviousness-type double patenting rejection over the claims in that patent.

of a microcombustor and a microgenerator (Br. 11).³ The Appellants argue that Vican discloses a 12.5 x 12.5 x 5.0 mm microreactor (abstract) and that Arana discloses a micromachined device comprising a fluid conducting tube having a region with a wall thickness less than 50 μm (abstract) (Br. 11-12). The Appellants argue that “[c]learly, the prior art relied on by the Examiner recognizes what is meant by ‘micro’ devices in the context of the subject invention” (Br. 12), and that “[n]othing in McAlonan suggests that the burner driven generator therein can or is intended to operate on a scale of applicants’ invention.” *See id.*

During patent prosecution, claims are to be given their broadest reasonable interpretation consistent with the Specification, as the claim language would have been read by one of ordinary skill in the art in view of the Specification. *See In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989); *In re Sneed*, 710 F.2d 1544, 1548, (Fed. Cir. 1983).

The Appellants’ Specification discloses (Spec. 5:15-18):

The system 10 is operative to generate approximately 168 milliamps at 12 volts DC using the configuration described below. It should be understood, however, that the system 10 is scalable and its components can be altered in size and capacity to increase the power output, as desired.

The statement that the Appellants’ system can be altered in size and capacity to increase the power output as desired indicates that the Appellants use the terms “micro-generator” and “micro-combustor” in a way that is not limited

³ Cohen discloses (col. 2, ll. 30-34): “The microcombustor and microgenerator have an outer diameter of the toroid that is between about 2 and about 15 mm. Their height is between about 1 and about 6 mm. The central combustion region has a characteristic dimension less than about 1 mm.”

to any small size but, rather, can be scaled up to larger sizes. Moreover, McAlonan does not limit his system to a remotely-located gas pipeline monitoring station. That application of the system is merely exemplary (col. 1, ll. 27-29). McAlonan's teaching that the system is applicable where "for example, output power levels even below 5 watts are required" (col. 1, ll. 20-24) would have led one of ordinary skill in the art, through no more than ordinary creativity, to scale the system such that the desired power output level below 5 watts, such as power levels of the devices encompassed by the Appellants' broad use of the terms "micro-generator" and "micro-combustor", are obtained. *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").⁴ The Examiner finds that "[a] skilled artisan would have every expectation of success in such selection of component size in McAlonan" (Ans. 25), and the Appellants have not specifically challenged that finding.

The Appellants argue that "the McAlonan system generates a 12-volt DC power output from battery 300" (Br. 12).

That argument is not well taken because the Appellants' disclosed power output also is 12 volts DC (Spec. 5:15-16).

The Appellants argue that their microgenerator and microcombustor are intended for replacing batteries in very small devices (Br. 12).

⁴ Thus, we are not persuaded by the Appellants' argument (Br. 12) that one of ordinary skill in the art would not look to McAlonan when designing a microgenerator system as that term is used by the Appellants.

That argument is not convincing because it is directed toward a limitation that is not in the claims. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982).

The Appellants argue that McAlonan discloses no structure for operating with liquid hydrocarbon fuel, and that McAlonan's disclosure of "natural gas, propane, or some other type of fuel" (col. 5, ll. 49-50) does not teach or suggest that two types of different fuels can be used alternatively (Br. 13).

McAlonan's disclosure that the fuel can be "natural gas, propane, or some other type of fuel" (col. 5, ll. 49-50) would have indicated to one of ordinary skill in the art that one type of fuel can be a pressurized gas, i.e., natural gas or propane, and that some other type of fuel, i.e., a type other than a pressurized gas, can be used. One of ordinary skill in the art, through no more than ordinary creativity, would have used well known fuel types other than a pressurized gas, such as a vaporizable liquid, e.g., gasoline. McAlonan's disclosure that "[t]hat fuel source provides, under the control of solenoid valve **107**, a pressurized flow of natural gas, propane, or some other type of fuel" (col. 5, ll. 48-50) would have led one of ordinary skill in the art, through no more than ordinary creativity, to configure the system for using any type of fuel controllable by the solenoid valve, such as both the disclosed pressurized hydrocarbon gases and a vaporizable hydrocarbon fuel that is liquid at atmospheric pressure, to provide the readily apparent benefit of fuel source versatility.

For the above reasons we are not convinced of reversible error in the rejection of claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over McAlonan.

Rejection #2

Guazzoni discloses “a thermoelectric generator having a counter-flow type regenerative heat-exchanger” (col. 1, ll. 17-19). The generator is fueled by a liquid hydrocarbon such as aviation fuel that is atomized and mixed with air (col. 1, ll. 65 – col. 2, ll. 4).

The Appellants argue that Guazzoni is limited to liquid hydrocarbon fuel, and does not teach or suggest the use of both hydrocarbon fuel in vapor form at ambient temperature and liquid hydrocarbon fuel (Br. 14). For the reasons given above regarding the rejection over McAlonan, one of ordinary skill in the art would have been led, through no more than ordinary creativity, to configure McAlonan’s system for using both of those types of fuels alternatively. Guazzoni further would have indicated to one of ordinary skill in the art that liquid hydrocarbon fuel that is subsequently atomized would be a suitable other type of fuel in McAlonan’s system.

We therefore are not persuaded of reversible error in the rejection of claims 5 and 13 under 35 U.S.C. § 103 over McAlonan in view of Guazzoni.

Rejection #3

Maxwell discloses that, compared to batteries, Maxwell’s ultracapacitor delivers up to 10 times the power, lasts up to 10 times as long, operates more reliably in high and low temperature conditions, requires far less maintenance and reduces environmental issues associated with battery disposal (p. 1).

McAlonan discloses that during a burner ignition attempt, power from battery 300 is used to open solenoid valve 107 and to energize igniter 105 (col. 7, ll. 45-50). The Examiner argues that Maxwell would have led one of ordinary skill in the art to use Maxwell’s ultracapacitor instead of

McAlonan's battery to obtain the benefits of an ultracapacitor relative to a battery disclosed by Maxwell (Ans. 28-29).

The Appellants argue (Br. 15):

The battery 300 in McAlonan supplies all power to the system all of the time, e.g., before and after start up. One or [sic] ordinary skill in the art would not be motivated to replace the battery 300 of McAlonan with an ultra-capacitor such as taught in the Maxwell Technologies reference.

That motivation would have been provided by the advantages of an ultracapacitor relative to a battery disclosed by Maxwell (p. 1).

Hence, we are not convinced of reversible error in the rejection of claims 7 and 16 under 35 U.S.C. § 103 over McAlonan in view of Maxwell.

Rejection #4

Burch discloses "a fuel cell system having a set of heat exchangers with integrated electric generating devices to convert a portion of the thermal energy flowing through each heat exchanger to electric energy" (¶ 0001). The system includes heat conduction walls or heat sinks 24 and 26 (¶ 0026; fig. 1) which the Examiner relies upon as corresponding to the Appellants' first and second heat spreaders (Ans. 8).

Elsner discloses "a superlattice quantum well thermoelectric material using elements for the layers all of which have the same crystalline structure" (col. 2, ll. 20-22).

The admitted prior art relied upon by the Examiner is (1) the Appellants' quantum well thermoelectric panels 44 were known in the art (Spec. 7:17-21), and (2) the material of which the Appellants' heat spreaders

are made is a combination of metal and ceramics which is extensively used in the semiconductor industry (Spec. 7:12-15).

The Appellants argue (Br. 15-16):

The Examiner admits that McAlonan fails to disclose any structural details of the “thermoelectric convertor unit 200” used therein, but maintains it would be obvious to: (1) employ the heat spreaders of Burch, and (2) replace the thermoelectric panels in Burch with the quantum well thermoelectric panels of Elsner et al, and then (3) substitute the resulting structure for the unit 200 in McAlonan. The Cohen et al reference is the closest prior art to the applicants’ invention, disclosing a micro-combustor and micro-generator, and that reference issued some 8 years after Elsner et al. Cohen et al fail to recognize the improvement in efficiency obtained by the thermoelectric module employed and claimed in this invention. And yet, Examiner considers it obvious to make the 3-step combination suggested above based on Elsner et al and Burch. Contrary to established case law, as cited above, the Examiner has used the teachings of the subject application as a road map to make the suggested combination. Claims 8-10 are clearly allowable over the art of record.

The Examiner has provided a reason as to why one of ordinary skill in the art would have combined the teachings of McAlonan, Burch, Elsner and the admitted prior art to arrive at the Appellants’ claimed invention (Ans. 8-10, 29-30). The Appellants have not addressed the Examiner’s reasoning and explained why it is in error.

Therefore, we are not convinced of reversible error in the rejection of claims 8-10 under 35 U.S.C. § 103 over McAlonan in view of Burch, Elsner and the admitted prior art.

Rejections #5 and 6

The Appellants rely upon their argument set forth with respect to claims 8-10 (Br. 16-17).

For the reason given above regarding the rejection of claims 8-10, we are not persuaded of reversible error in the rejections of claim 14 under 35 U.S.C. § 103 over McAlonan in view of Burch, or claim 15 under 35 U.S.C. § 103 over McAlonan in view of Elsner and the admitted prior art.

Rejection #7

Cohen discloses a thermoelectric microgenerator comprising a counterflow heat exchanger combustor having a double spiral or toroidal “Swiss roll” configuration with a reactant channel and an exhaust channel coiled around each other and separated by a channel wall comprised partly of thermoelectric “active wall” elements 50 consisting of n-type and p-type conductivity thermoelectric material (col. 1, ll. 21-24; col. 2, ll. 11-15, 20-25, 48-51; col. 4, ll. 38-50; fig. 4a). Regarding the combustor’s fuel, Cohen discloses (col. 6, ll. 15-23):

Commercially available hydrocarbon fuels can be used with the present microcombustor. Fuels that are liquids at fairly low storage pressure and room temperature, but are gaseous as atmospheric pressure and room temperature are preferred such that no vaporization is required. Examples of useful hydrocarbon fuels include but are not limited to butane, propane, and methylacetylene. In addition, specially formulated hydrocarbon fuels or non-hydrocarbon fuels such as hydrogen and ammonia can be used.

The Appellants argue that “[f]or the reasons given above in connection with a discussion of the rejections in Sections 1-6 above, no one of ordinary skill in the art working with the micro-generator of Cohen et al

would look to McAlonan for a teaching of a micro-controller or an igniter, and nothing in either reference suggests such a combination could or should be made” (Br. 17).

Cohen discloses an igniter (col. 5, ll. 41-49; col. 10, ll. 7-23). The Examiner concludes that it would have been obvious to one of ordinary skill in the art to use McAlonan’s controller, which preferably incorporates at least one microprocessor, to control the various functions such as fuel flow, ignition and electrical output monitoring (Ans. 14). The Examiner’s conclusion is reasonable and has not been specifically challenged by the Appellants. Consequently, we are not convinced of error in that conclusion.

The Appellants argue that Cohen does not disclose a fluid control device that can supply hydrocarbon fuel in vapor form and vaporized liquid hydrocarbon fuel alternatively (Br. 17).

Cohen’s disclosure that “[f]uels that are liquids at fairly low storage pressure and room temperature, but are gaseous at atmospheric pressure and room temperature are preferred such that no vaporization is required” (col. 6, ll. 16-19) would have led one of ordinary skill in the art to use either the preferred fuel that is gaseous at atmospheric pressure or a non-preferred fuel that requires vaporization such as a hydrocarbon fuel that is liquid at atmospheric pressure. One of ordinary skill in the art would have been led by Cohen to configure the fuel flow control system to enable the use of both types of fuel to provide the readily apparent benefit of fuel source versatility.

We therefore are not persuaded of reversible error in the rejection of claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Cohen in view of McAlonan.

Rejections #8-10

The Appellants rely solely upon arguments set forth with respect to rejections 2, 3 and 6 (Br. 17-18).

Those arguments are not convincing for the reasons given above regarding those rejections.

Accordingly, we are not persuaded of reversible error in the rejections under 35 U.S.C. § 103 of claims 5 and 13 over Cohen in view of McAlonan and Guazzoni, claims 7 and 16 over Cohen in view of McAlonan and Maxwell, and claim 15 over Cohen in view of McAlonan and Elsner.

Rejection #11

Arana discloses a micromachined device having many uses including use in a portable electric generator (col. 1, ll. 19-27; col. 3, ll. 29-40).

The Appellants argue that “[f]or the reasons given above in connection with a discussion of the rejections in Section 1-6 above, no one of ordinary skill in the art working with the micro-machined device of Arana et al would look to McAlonan for a teaching of a fuel control device, an ignitor or a micro-controller, and nothing in either reference suggests such a combination could or should be made” (Br. 18).

The Examiner has provided reasons why one of ordinary skill in the art would have used McAlonan’s fuel control device, igniter and microcontroller in Arana’s portable electric generator (Ans. 17-18, 32-24), and the Appellants have not explained why the Examiner’s reasons are in error.

The Appellants argue that there is no teaching or suggestion in Arana et al of a fuel control device of any kind, much less a fuel control device

which can alternatively supply hydrocarbon fuel in vapor form and vaporized liquid hydrocarbon fuel” (Br. 18).

As pointed out by the Examiner (Ans. 17), fuel control would be needed in Arana’s portable electric generator to control the combustion process. One of ordinary skill in the art would have been led to use a fuel control device that alternatively supplies hydrocarbon fuel in vapor form and vaporized liquid hydrocarbon fuel for the reasons given above regarding rejection #1 over McAlonan.

For the above reasons we are not persuaded of reversible error in the rejection of claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Arana in view of McAlonan.

Rejections #12-16

Regarding rejections #12-16 the Appellants rely only upon their arguments set forth with respect to rejections 2-6 (Br. 18-19).

Those arguments are not convincing for the reasons given above regarding those rejections.

Hence, the Appellants have not convinced us of reversible error in the rejections under 35 U.S.C. § 103 of claims 5 and 13 over Arana in view of McAlonan and Guazzoni, claims 7 and 16 over Arana in view of McAlonan and Maxwell, claims 8-10 over Arana in view of McAlonan, Burch and Elsner, claim 14 over Arana in view of McAlonan and Burch, and claim 15 over Arana in view of McAlonan and Elsner.

Rejection #17

Vican discloses a spiral, “Swiss roll” microreactor having a layer of platinum catalyst on the internal channel walls to lower the range of operating temperatures (p. 910). The microreactor is coupled to commercial

thermoelectric modules to demonstrate chemical to electrical energy conversion.” *See id.*

The Appellants argue that “[f]or the reasons given above in connection with a discussion of the rejections in Sections 1-6 above, no one of ordinary skill in the art working with the microreactor of Vican et al would look to McAlonan for a teaching of a micro-controller, and nothing in either reference suggests such a combination could or should be made (Br. 19-20).

The Examiner has concluded that it would have been obvious for one of ordinary skill in the art to use a microcontroller such as that of McAlonan with Vican’s microreactor to control fuel flow, ignition and electrical output monitoring (Ans. 21, 35-36). The Appellants have not specifically addressed that conclusion and explained why it is in error.

The Appellants argue that “there is no teaching or suggestion in Vican et al of a fuel control device which can alternatively supply hydrocarbon fuel in vapor form and vaporized liquid hydrocarbon fuel, as claimed in amended claims 1 and 11. That defect is not cured by McAlonan, as discussed above” (Br. 20).

One of ordinary skill in the art would have been led to use with Vican’s microreactor a fuel control device that alternatively supplies hydrocarbon fuel in vapor form and vaporized liquid hydrocarbon fuel for the reasons given above regarding rejection #1 over McAlonan.

For the above reasons we are not persuaded of reversible error in the Examiner’s rejection of claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Vican in view of McAlonan.

Rejections 18-22

Regarding rejections 18-22 the Appellants rely only upon their arguments set forth with respect to rejections 2-6 (Br. 20-21).

Those arguments are not persuasive for the reasons given above with respect to rejections 2-6.

Thus, we are not persuaded of reversible error in the rejections under 35 U.S.C. § 103 of claims 5 and 13 over Vican in view of McAlonan and Guazzoni, claims 7 and 16 over Vican in view of McAlonan and Maxwell, claims 8-10 over Vican in view of McAlonan, Burch and Elsner, claim 14 over Vican in view of McAlonan and Burch, and claim 15 over Vican in view of McAlonan and Elsner.

Rejections 23 and 24

The Appellants do not challenge the obviousness-type double patenting rejections (Br. 21). Hence, we summarily affirm those rejections.

New ground of rejection

Under 37 C.F.R. § 41.50(b) we enter the following new ground of rejection.

Claims 1-16 are rejected under 35 U.S.C. § 112, first paragraph, as the Appellants' disclosure, as originally filed, fails to provide adequate written descriptive support for the invention now claimed.

A specification complies with the 35 U.S.C. § 112, first paragraph, written description requirement if it conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention. *See Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991); *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983)

Both of the Appellants' independent claims (1 and 11) require a fuel control device effective to alternatively supply hydrocarbon fuel in vapor form at ambient temperature to the microcombustor or hydrocarbon fuel in liquid form at ambient temperature which is vaporized prior to input to the microcombustor. That claim requirement was added by amendment (filed Feb. 21, 2006).

For a disclosure of that claim requirement the Appellants rely upon their Specification at paragraphs 0022 to 0024 (Br. 4).

Those paragraphs describe two separate embodiments. In one embodiment (figs. 1 and 2) the hydrocarbon fuel is in vapor form at ambient temperature and its flow is controlled by fuel control valve 16 (Spec. 8:10-14; 9:1-2). In the other embodiment (figs. 3 and 4) the hydrocarbon fuel is in liquid form and is vaporized using vaporizer/pump 58 (Spec. 8:14-16; 9:12-14). There is no disclosure which shows possession of an invention wherein a fuel control device is effective for alternatively supplying hydrocarbon fuel in vapor form at ambient temperature to the microcombustor, or hydrocarbon fuel in liquid form at ambient temperature which is vaporized prior to input to the microcombustor.

Therefore, claims 1-16 are rejected as failing to comply with the 35 U.S.C. § 112, first paragraph, written description requirement.

DECISION

The rejections of claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over McAlonan; claims 5 and 13 under 35 U.S.C. § 103 over McAlonan in view of Guazzoni; claims 7 and 16 under 35 U.S.C. § 103 over McAlonan in view of Maxwell; claims 8-10 under 35 U.S.C. § 103 over McAlonan in view of Burch, Elsner and the admitted prior art; claim 14 under 35 U.S.C. § 103

over McAlonan in view of Burch; claim 15 under 35 U.S.C. § 103 over McAlonan in view of Elsner and the admitted prior art; claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Cohen in view of McAlonan; claims 5 and 13 under 35 U.S.C. § 103 over Cohen in view of McAlonan and Guazzoni; claims 7 and 16 under 35 U.S.C. § 103 over Cohen in view of McAlonan and Maxwell; claim 15 under 35 U.S.C. § 103 over Cohen in view of McAlonan and Elsner; claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Arana in view of McAlonan; claims 5 and 13 under 35 U.S.C. § 103 over Arana in view of McAlonan and Guazzoni; claims 7 and 16 under 35 U.S.C. § 103 over Arana in view of McAlonan and Maxwell; claims 8-10 under 35 U.S.C. § 103 over Arana in view of McAlonan, Burch and Elsner; claim 14 under 35 U.S.C. § 103 over Arana in view of McAlonan and Burch; claim 15 under 35 U.S.C. § 103 over Arana in view of McAlonan and Elsner; claims 1-4, 6, 11 and 12 under 35 U.S.C. § 103 over Vican in view of McAlonan; claims 5 and 13 under 35 U.S.C. § 103 over Vican in view of McAlonan and Guazzoni; claims 7 and 16 under 35 U.S.C. § 103 over Vican in view of McAlonan and Maxwell; claims 8-10 under 35 U.S.C. § 103 over Vican in view of McAlonan, Burch and Elsner; claim 14 under 35 U.S.C. § 103 over Vican in view of McAlonan and Burch; claim 15 under 35 U.S.C. § 103 over Vican in view of McAlonan and Elsner; claims 1-6 and 8-15 under the doctrine of obviousness-type double patenting over claims 1, 3-6, 8, 10 and 11 of US 7,180,264; and claims 1-6 and 8-15 under the doctrine of obviousness-type double patenting over claims 1-6 of US 6,987,329 B1 are affirmed. Under 37 C.F.R. § 41.50(b) a new ground of rejection of claims 1-16 under 35 U.S.C. § 112, first paragraph, written description requirement, has been entered.

Regarding the affirmed rejection(s), 37 CFR § 41.52(a)(1) provides "[a]ppellant may file a single request for rehearing within two months from the date of the original decision of the Board."

In addition to affirming the examiner's rejection(s) of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 41.50(b). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 CFR § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should the appellant elect to prosecute further before the examiner pursuant to 37 CFR § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal,

Appeal 2008-0288
Application 10/910,528

this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

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

AFFIRMED, 37 C.F.R. § 41.50(b)

JRG

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