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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JAMES F. WOLTER

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Appeal 2019-003335  
Application 15/135,688  
Technology Center 2800

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Before JAMES C. HOUSEL, BRIAN D. RANGE, and JANE E. INGLESE,  
*Administrative Patent Judges.*

INGLESE, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellant<sup>1</sup> requests our review under 35 U.S.C. § 134(a) of the Examiner’s decision to finally reject claims 1–20.<sup>2</sup> We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to the “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies James Frederick Wolter as the real party in interest. Appeal Brief filed December 2, 2018 (“Appeal Br.”) at 1.

<sup>2</sup> Final Office Action entered August 22, 2018 (“Office Act.”) at 1.

### CLAIMED SUBJECT MATTER

Appellant claims an energy conversion apparatus (independent claim 1) and an energy management system (independent claims 11 and 16). Appeal Br. 2–4. Claim 1 illustrates the subject matter on appeal, and is reproduced below with emphasis added to highlight subject matter of particular relevance to the present appeal:

1. An energy conversion apparatus, comprising:  
a controller:  
at least one configurable energy source input,  
    *wherein the controller automatically configures one configurable energy source input to receive an electric output of an energy source based upon energy source characteristic data received by the controller from the energy source when the energy source is connected to the configurable energy source input,*  
    wherein the energy source characteristic data is stored in an energy source characteristic data file within a memory that is integral within the energy source;  
at least one energy storage device connection; and  
at least one energy load output,  
    wherein the energy conversion apparatus is configured to provide energy to the at least one energy load output and the at least one energy storage device connection from the energy source input.

Appeal Br. 14 (Claims Appendix) (emphasis and spacing added).

### REJECTIONS

The Examiner maintains the following rejections in the Examiner's Answer entered January 23, 2019 ("Ans."):<sup>3</sup>

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<sup>3</sup> The Examiner withdrew the rejection of claim 4 under 35 U.S.C. § 112, fourth paragraph in the Answer. Ans. 3.

I. Claim 18 under 35 U.S.C. § 112, fourth paragraph as being of improper dependent form for failing to further limit the subject matter of the claim from which it depends, or for failing to include all the limitations of the claim from which it depends;

II. Claims 1–10 and 16–20 under 35 U.S.C. § 102(b) as anticipated by Johnson et al. (US 2013/0147272 A1, published June 13, 2013); and

III. Claims 11–15 under 35 U.S.C. § 103(a) as unpatentable over Sella et al. (US 2009/0206666 A1, published August 20, 2009) in view of Johnson.

#### FACTUAL FINDINGS AND ANALYSIS

Upon consideration of the evidence relied upon in this appeal and each of Appellant’s contentions, we reverse the Examiner’s rejection of claim 18 under 35 U.S.C. § 112, fourth paragraph, for the reasons set forth in the Appeal Brief and below, and we affirm the Examiner’s rejection of 1–10 and 16–20 under 35 U.S.C. § 102(b), and rejection of claims 11–15 under 35 U.S.C. § 103(a), for the reasons set forth in the Final Action, the Answer, and below.

We review appealed rejections for reversible error based on the arguments and evidence the Appellant provides for each issue the Appellant identifies. 37 C.F.R. § 41.37(c)(1)(iv); *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (explaining that even if the Examiner had failed to make a prima facie case, “it has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections”)).

Rejection I

We first address the Examiner's rejection of claim 18 under 35 U.S.C. § 112, fourth paragraph.

Claim 18 depends from claim 17, which depends from independent claim 16. Claim 17 recites that "the controller further includes an energy source health data input, and wherein the controller determines energy flow based upon the energy source health data." Claim 18 recites that "the controller further includes an energy source health data input, and wherein the energy source health data is representative of at least one of: a health of at least one energy source, a health of at least one connection to at least one energy source, or availability of a primary energy source to at least one secondary energy source."

The Examiner determines that claim 18's representation of what the energy source health data is representative of "does not recite any narrowing structure or functionality." Final Act. 4.

As Appellant argues (Appeal Br. 5), however, claim 17 places no limit on the recited "energy source health data," while claim 18 recites that the energy source health data is representative of at least one of a health of at least one energy source, a health of at least one connection to at least one energy source, or the availability of a primary energy source to at least one secondary energy source. Claim 18, therefore, further limits claim 17, from which it depends, and is thus not an improper dependent claim. MPEP §608.01(n)(III).

We, accordingly, do not sustain the Examiner's rejection of claim 18 under 35 U.S.C. § 112, fourth paragraph.

## Rejection II

We turn next to the Examiner's rejection of claims 1–10 and 16–20 under 35 U.S.C. § 102(b) as anticipated by Johnson.

Although Appellant presents separate arguments for independent claims 1 and 16, Appellant's arguments for both claims are essentially the same. Appeal Br. 5–10. We, therefore, select claim 1 as representative, and decide the appeal as to claims 1–10 and 16–20 based on claim 1 alone. 37 C.F.R. § 41.37(c)(1).

Claim 1 requires the recited energy conversion apparatus to comprise, in part, a controller and at least one configurable energy source input, and claim 1 recites that the controller automatically configures one configurable energy source input to receive an electric output of an energy source based upon energy source characteristic data received by the controller from the energy source when the energy source is connected to the configurable energy source input. Claim 1 further recites that the energy source characteristic data is stored in an energy source characteristic data file within a memory that is integral within the energy source.

Johnson discloses a power conversion switch that converts electric power provided by one or more power providing systems in one or more power formats into formats suitable for consumption by one or more power consuming systems. Johnson ¶ 10. More specifically, Johnson discloses system 100 (energy conversion apparatus) comprising power conversion switch 102 that includes numerous input adapters 106 (configurable energy source inputs) and output adapters 106 (energy load outputs). Johnson ¶¶ 11, 12, 22, 23; Fig. 1. Johnson discloses that system 100 comprises source systems 112 (energy sources), including photovoltaic system 112a and wind

system 112b, which provide electrical energy to respective input adapters 106 to which they are coupled, and consuming systems 112 (loads), including grid 112d and storage 112e, which are coupled with respective output adapters 106 and consume electrical energy provided by output adapters 106. Johnson ¶ 12, 22, 23; Fig. 1. Johnson discloses that adapters 106 convert electrical energy from one format to another format, such as from a DC format received from a source entity, to an AC format provided to a consuming entity. Johnson ¶ 22. Johnson discloses that power conversion switch 102 also includes control circuitry 108 (controller) that “control[s] the operation of power conversion switch 102 by controlling adapters 106.” Johnson ¶¶ 26, 59, 65; Fig. 1. Johnson discloses that control circuitry 108 may change a configuration of an adapter, or selectively enable or disable an adapter. Johnson ¶¶ 26, 65.

Johnson discloses that control circuitry 108 (controller) receives information from, and sends information to, systems 112 via communication circuitry 116. Johnson ¶¶ 49, 50, 51; Fig. 1. Johnson discloses that information received by communication circuitry 116 from systems 112 includes a number of solar panels on line or idle in photovoltaic system 112a, and a number of wind turbines online or idle in wind system 112b (energy source characteristic data). Johnson ¶ 50. The Examiner finds that the ability of systems 112a and 112b (energy sources) to gather information and send it to control circuitry 108 “is evidence of an inherent memory that is integral within the energy source,” because “[t]o gather information and remember it long enough to transmit it to another device, requires a memory.” Final Act. 7.

Appellant argues that Johnson does not disclose or suggest an energy source or system 112 that includes an integral memory having energy source characteristic data stored within an energy source characteristic data file within the integral memory. Appeal Br. 6–7.

As discussed above, however, Johnson discloses that power conversion switch 102 includes communication circuitry 116 that receives information from systems 112, including a number of solar panels on line or idle in photovoltaic system 112a, and a number of wind turbines online or idle in wind system 112b (energy source characteristic data). Johnson ¶¶ 49, 50. One of ordinary skill in the art would have inferred from these disclosures that systems 112a, 112b (energy sources) include a memory that counts the number of on line or idle solar panels and wind turbines, respectively, and transmits this information (energy source characteristic data) to communication circuitry 116. Without such a memory, systems 112a, 112b (energy sources) would be unable to perform a counting operation, and also would not be able to retain the counted values. Nor would systems 112a, 112b (energy sources) be able to transmit the retained values to communication circuitry 116. And because systems 112a, 112b (energy sources) themselves perform the counting operation and transmit the counted values (energy source characteristic data), one of ordinary skill in the art would have inferred that the memory necessary to perform these operations is integral to systems 112a, 112b (energy sources). *CRFD Research, Inc. v. Matal*, 876 F.3d 1330, 1338 (Fed. Cir. 2017) (“Anticipation is established when ‘one skilled in the art would reasonably understand or infer from the prior art reference’s teaching that every claim [limitation] was disclosed in that single reference.’”) (quoting *Akamai Techs., Inc. v. Cable*

& *Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1192–93 (Fed. Cir. 2003)); *In re Preda*, 401 F.2d 825, 826 (CCPA 1968) (“[I]t is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.”).

Because Appellant does not timely dispute the Examiner’s finding that systems 112a and 112b (energy sources) inherently include an integral memory,<sup>4</sup> Appellant’s argument in the Appeal Brief that Johnson does not explicitly disclose or suggest an energy source that includes an integral memory does not identify reversible error in the Examiner’s rejection. *Compare* Final Act. Final Act. 7, with Appeal Br. 5–10; *Jung*, 637 F.3d at 1365.

Appellant argues that “even if a prior art reference were cited that disclosed an energy source having an integral memory, as recited in claim 1, storing any of the information, as discussed within *Johnson*, would not be meaningful in the context of automatically configuring a configurable

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<sup>4</sup> Although Appellant argues in the Reply Brief that the Examiner fails to establish inherency (Reply Br. 2–4), we do not consider these arguments because Appellant does not show good cause for raising the arguments for the first time in the Reply Brief. 37 C.F.R. § 41.37(c)(1)(iv); 37 C.F.R. § 41.41(b)(2) (arguments raised for the first time in the Reply Brief that could have been raised in the Appeal Brief will not be considered by the Board unless good cause is shown); *see also Ex parte Borden*, 93 USPQ2d 1473, 1474 (BPAI 2010) (Informative) (explaining that under the previous rules, which are similar to the current rules, “the reply brief [is not] an opportunity to make arguments that could have been made in the principal brief on appeal to rebut the Examiner’s rejections, but were not.”); *Optivus Technology, Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (argument raised for the first time in the reply brief that could have been raised in the opening brief is waived).

energy source input to receive an electric output of an energy source.”

Appeal Br. 7. Appellant argues that the number of solar panels and wind turbines that are on line or idle is not useful for configuring a configurable energy source input to receive an electric output of an energy source, but is merely representative of temporal information related to a particular system and/or information received from a system after the system is already configured. Appeal Br. 7–8.

Appellant’s arguments are unpersuasive of reversible error in the Examiner’s rejection, however, because the claim elements upon which the arguments are grounded are functional in nature<sup>5</sup> and do not patentably distinguish the claimed energy conversion apparatus from the system disclosed Johnson, for reasons that follow.

Claim 1 recites that *the controller automatically configures one configurable energy source input to receive an electric output of an energy source based upon energy source characteristic data received by the controller from the energy source when the energy source is connected to the configurable energy source input*. Claim 1 thus recites two functions of the controller (configuring a configurable energy source input and receiving energy source characteristic data from the energy source), recites a function of a configurable energy source input (receiving an electric output of an energy source), and also recites the function of connecting the energy source to the configurable energy source input.

It has long been held that “apparatus claims cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909

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<sup>5</sup> We recognize that the claims are directed to electronic components that must include the programming capable of performing the recited functions.

F.2d 1464, 1468 (Fed. Cir. 1990). Nonetheless, a patent applicant is free to claim elements of a device either structurally or functionally. *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971); *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997). But choosing to claim an element of a device functionally—by what the element does rather than what it is—carries a risk because a claimed apparatus must be distinguished from the prior art based upon its structure rather than its function. *Swinehart*, 439 F.2d at 212–213 (“[I]t is elementary that the mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art.”); *In re Michlin*, 256 F.2d 317, 320 (CCPA 1958) (“It is well settled that patentability of apparatus claims must depend upon structural limitations and not upon statements of function.”).

When functional language recited in an apparatus claim is associated with programming or some other structure required to perform the function, where there is reason to believe that a prior art structure is capable of performing the recited function without further programming, the burden shifts to the applicant to show that the recited function patentably distinguishes the claimed structure from the prior art structure. *Swinehart*, 439 F.2d at 213 (“where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.”); *In re Hallman*, 655 F.2d 212, 215 (CCPA 1981) (“Because Hallman [the appellant] has failed to demonstrate that the functional

characteristics of his claimed invention [a structure] are not inherent in the structure disclosed by Colom [the applied prior art], we affirm the rejection of the claims under 35 U.S.C. §§ 102 and 103.”); *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1380 (Fed. Cir. 2011)

As discussed above, Johnson discloses that control circuitry 108 (controller) receives information from systems 112 via communication circuitry 116, including a number of solar panels on line or idle in photovoltaic system 112a (energy source characteristic data), and Johnson discloses that control circuitry 108 may change a configuration of an adapter 106, or enable an adapter 106, such an input adapter 106a (configurable energy source input). Johnson ¶¶ 26, 49, 50, 51, 59, 65. In view of these disclosures in Johnson, a reasonable basis exists for finding that Johnson’s control circuitry 108, without further programming, is capable of receiving a number of solar panels on line or idle in photovoltaic system 112a (energy source characteristic data), and automatically configuring input adapter 106a (configurable energy source input) based upon this information to receive electrical energy (an electric output) from photovoltaic system 112a (energy source) when photovoltaic system 112a (energy source) is connected to input adapter 106a (configurable energy source input). The burden therefore shifts to Appellant to show otherwise. *Swinehart*, 439 F.2d at 213.

On the record before us, Appellant does not meet this burden. Appellant’s arguments do not identify any structural difference between control circuitry 108, input adapter 106a (configurable energy source input), and photovoltaic system 112a (energy source) of Johnson’s system 100, and the controller, configurable energy source input, and energy source, respectively, of the energy conversion apparatus recited in claim 1. Nor do

Appellant's arguments show that Johnson's control circuitry 108 is incapable, without further programming, of receiving a number of solar panels on line or idle in photovoltaic system 112a (energy source characteristic data), and automatically configuring input adapter 106a (configurable energy source input) based upon the number of solar panels on line or idle, to receive electrical energy (an electric output) from photovoltaic system 112a (energy source) when photovoltaic system 112a (energy source) is connected to input adapter 106a (configurable energy source input), as recited in claim 1.

Consequently, Appellant's arguments do not identify reversible error in the Examiner's rejection of claim 1 as anticipated by Johnson. We, accordingly, sustain the Examiner's rejection of claims 1–10 and 16–20 under 35 U.S.C. § 102(b).

### Rejection III

We turn now to the Examiner's rejection of claims 11–15 under 35 U.S.C. § 103(a) as unpatentable over Sella in view of Johnson. To address this rejection, Appellant presents arguments directed to independent claim 11 only, to which we accordingly limit our discussion. Appeal Br. 10–13; 37 C.F.R. § 41.37(c)(1)(iv).

Similar to claim 1, claim 11 requires the recited energy management system to comprise, in part, a controller and at least two energy source inputs, and claim 11 recites that the controller automatically configures an energy source input based upon energy source characteristic data from an energy source characteristic data file received by the controller from the energy source when the energy source is connected to the configurable energy source input. Claim 11 further recites that the energy source

characteristic data file is stored in a memory that is integral within the energy source.

To address this rejection, Appellant repeats the arguments directed to Johnson that Appellant presents for claim 1 (discussed above), while acknowledging that the Examiner does not rely on Sella for disclosure of subject matter that Appellant asserts is missing from Johnson. Appeal Br. 10–13.

Because Appellant’s arguments for claim 1 do not identify reversible error in the Examiner’s rejection of claim 1 for the reasons discussed above, Appellant’s arguments for claim 11 also do not identify reversible error in the Examiner’s rejection of claim 11, for the same reasons. We, accordingly, sustain the Examiner’s rejection of claims 11–15 under 35 U.S.C. § 103(a).

#### CONCLUSION

Claims	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
18	112, fourth paragraph	Improper dependent		18
1–10, 16–20	102(b)	Johnson	1–10, 16–20	
11–15	103(a)	Johnson, Sella	11–15	
<b>Overall Outcome</b>			1–20	

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