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EXAMINER

GRANT, ROBERT J

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ANGELO E. MASCIA and JOSEPH A. MASCIA

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Appeal 2020-001758  
Application 15/018,364  
Technology Center 2800

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BEFORE JASON V. MORGAN, JEREMY J. CURCURI, and  
MICHAEL J. ENGLE, *Administrative Patent Judges*.

CURCURI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner’s decision to reject Appellant’s claim (“Claim 1”). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Angelo E. Mascia and Joseph A. Mascia. Appeal Br. 3 (Sept. 20, 2019) (all references to “Appeal Br.” are to the appeal brief filed on this date).

CLAIMED SUBJECT MATTER

The claim is directed to “[a] self-charging all electric vehicle.”  
Abstract. Claim 1, reproduced below with key recitations emphasized, is illustrative of the claimed subject matter:

1. We claim a *self-charging* all electric vehicle, comprising:
  - a. three banks of batteries to power in rotation, one at a time, the prime mover, or
  - b. four banks of batteries to power in rotation, two at a time connected in series, the prime mover,
  - c. a prime mover which is a permanent magnet brushless direct current motor that drives the three-wire direct current generator,
  - d. a three-wire direct current generator which provides two 125 voltages from either side of the neutral wire to charge simultaneously two banks of batteries and 250 volts to power the traction motors,
  - e. front and front and rear traction motors for producing rotational energy, and
  - f. means for controllably coupling rotational energy from the traction motors to the wheels, whereby the vehicle will be self-propelled to roll along a surface,
  - g. the floating charge method for charging the banks of batteries two at a time,
  - h. the constant potential method for charging the banks batteries two at a time.

## REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Floyd	US 2002/0063549 A1	May 30, 2002
Howard	US 2010/0006351 A1	Jan. 14, 2010
Peterson	US 2011/0215641 A1	Sept. 8, 2011
Sadler	US 2012/0330488 A1	Dec. 27, 2012

## REJECTIONS

Claim 1 is rejected under 35 U.S.C. § 101 as lacking utility. Final Office Action mailed June 4, 2018 (“Final Act.”) 7–8.

Claim 1 is rejected under U.S.C. § 112(a) as lacking enablement. Final Act. 9–11.

Claim 1 is rejected under 35 U.S.C. § 103 as obvious over Sadler, Peterson, and Howard. Final Act. 12–14.

Claim 1 is rejected under 35 U.S.C. § 103 as obvious over Sadler, Peterson, Howard, and Floyd. Final Act. 14–17.

## OPINION

### *The Enablement Rejection of Claim 1*

The Examiner rejects Claim 1 as lacking enablement. Final Act. 9–11. Among other related determinations, the Examiner determines “one having ordinary skill would not know how a closed system can provide charging to itself.” Final Act. 10.

Appellant does not persuasively dispute the Examiner’s characterization of the purported utility of the claimed self-charging all electric vehicle as being directed to “a closed system [that] can provide charging to itself.” Rather, Claim 1 recites “a self-charging all electric

vehicle” comprising a “generator which provides two 125 voltages from either side of the neutral wire to charge simultaneously two banks of batteries and 250 volts to power the traction motors.” Appellant argues that with this claim, “[t]he power losses in the vehicle will not gradually reduce its speed and bring it to a stop” and that “the driving range will not be limited and no range anxiety problem will exist.” Appeal Br. 4. Appellant emphasizes that with the claimed invention “no outside source of power is necessary.” *Id.* Thus, Appellant argues that Claim 1 is capable of powering the motors while simultaneously keeping the batteries fully charged.

The Examiner’s and Appellant’s characterization of Claim 1 further accords with the Specification, which discloses that the purported advantages of Claim 1 include obviating the need for fossil-fuel fill-ups, public charging stations, power from a standard household outlet, expensive high-voltage circuit battery chargers, or battery-swapping stations. Spec. 2 (Feb. 8, 2016) (unless otherwise noted, all citations to the “Spec.” are to the originally-filed specification). The Specification repeatedly suggests that “[t]wo banks [of batteries] at a time will be maintained at full charge . . . while the third bank provides power to the prime mover” and to the other two banks of batteries. Spec. 6; *see also id.* at 7 (similar for four banks of batteries).

Appellant nominally concedes that the claimed “vehicle will operate . . . until the banks of batteries have become depleted and have to be replaced,” and thus Appellant submits that the claimed vehicle is not a “perpetual motion machine . . . that can continuously produce work with no energy input, or that can continuously convert heat completely into work.” Appeal Br. 5; *see also* Spec. 6 (proposing “lead-acid batteries” and “lithium-iron phosphate batteries” because they “can typically be charged in excess of

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2000 times”). But Appellant further submits that “heat will not affect the mechanical energy or work” because “[t]he banks of batteries can be either air-cooled or liquid-cooled and the prime mover, the three-wire direct current generator, and the traction motors can be water cooled,” while “[a]ll auxiliary functions such as[] water pump, air conditioning, lighting and power steering system are electrically powered.” Appeal Br. 4 (citing Spec. 15 (Apr. 12, 2016)). That is, Appellant submits that unclaimed cooling mechanisms would somehow prevent the batteries from depleting.

Appellant further argues that the claimed “SYSTEM *CREATES* NEW ENERGY FROM THE CHEMICAL ACTION IN THE BATTERIES AND THUS IT DOES NOT NEED ANY EXTERNAL SOURCE OF ENERGY TO BE INPUTTED INTO IT.” *Id.* (emphasis added). But batteries do not *create* new energy. Rather, they *release* stored chemical energy. Moreover, transferring released energy from one bank of a vehicle’s batteries to another bank of the vehicle’s batteries does not make the vehicle *self-charging*. No additional energy is being stored in batteries in the aggregate as a result of such transfers.

For these reasons, the claimed vehicle does not produce the claimed result of being *self-charging* and simultaneously both powering the motor and charging the other banks of batteries, and thus the enablement requirement is not met. *Newman v. Quigg*, 877 F.2d 1575, 1582 (Fed. Cir.). Accordingly, we sustain the Examiner’s 35 U.S.C. § 112(a) rejection of claim 1.

#### *The Utility Rejection of Claim 1*

The Examiner also rejects Claim 1 as lacking utility. Final Act. 7–8. In particular, the Examiner determines

[i]t is not clear from the specification, or from knowledge that one having ordinary skill in the art would have, how the battery banks are capable of charging each other, back and forth, using the components described and not have a net power loss from the operation of the vehicle and the conversion losses which all of these components are known to exhibit.

Final Act. 8.

A claimed invention must “have a specific and substantial utility to satisfy § 101.” *In re Fisher*, 421 F.3d 1365, 1371 (Fed. Cir. 2005). Here, the “substantial utility” purportedly claimed is that the vehicle is “self-charging” in that it can simultaneously power the motors while charging the other banks of batteries and it does not need external sources of energy such as chargers or battery swaps to enable “longer drives” without “range anxiety problems.” Spec. 2. As discussed above, the claimed invention does not operate to produce this result. Therefore, claim 1 lacks the utility required under 35 U.S.C. § 101. *Newman*, 877 F.2d at 1581–82. Accordingly, we sustain the Examiner’s 35 U.S.C. § 101 rejection of claim 1.

*The Obviousness Rejection of Claim 1 over Sadler, Peterson, and Howard*

The Examiner finds Sadler, Peterson, and Howard teach all limitations of Claim 1. Final Act. 12–14.

The Examiner finds Sadler teaches the following elements recited in Claim 1:

- a. three banks of batteries to power in rotation, one at a time, the prime mover, or
- b. four banks of batteries to power in rotation, two at a time connected in series, the prime mover,
- c. a prime mover which is a permanent magnet brushless direct current motor that drives the three-wire direct current generator,
- ...

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- f. means for controllably coupling rotational energy from the traction motors to the wheels, whereby the vehicle will be self-propelled to roll along a surface, . . .
- h. the constant potential method for charging the banks batteries two at a time.

*See* Final Act. 12–13 (citing Sadler ¶¶ 6–7, 10, 14, 30–31, 42, 59; Fig. 4).

The Examiner finds Peterson teaches the following elements recited in Claim 1:

- d. a three-wire direct current generator which provides two 125 voltages from either side of the neutral wire to charge simultaneously two banks of batteries and 250 volts to power the traction motors,  
... .
- g. the floating charge method for charging the banks of batteries two at a time.

*See* Final Act. 13 (citing Peterson ¶¶ 27, 33; Fig. 2, element 34).

The Examiner reasons

it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a generator with those values as it is close to the standard household power in the United States, which would allow the vehicle to have receptacles which can be used to power devices, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Final Act. 13–14 (citing *In re Boesch*, 617 F.2d 272, 205 (CCPA 1980)).

The Examiner further finds Howard teaches the following element recited in Claim 1: “e. front and front and rear traction motors for producing rotational energy.” *See* Final Act. 14 (citing Howard Fig. 1, element 3).

The Examiner further reasons

[i]t would have been obvious to one having ordinary skill in the art at the time of this invention to take the teaching of

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Peterson[']s generator and floating charge method, and use it with the vehicle of Sadler in order to provide charge to the batteries, and further take the teaching of Howard and have multiple motors in order to have greater control of the rotational power provided to each of the wheels.

Final Act. 14.

We have reviewed the record, and to the extent Claim 1 permits merely recovering energy or moving energy around within a system rather than creating energy, we determine the evidence supports the Examiner's fact findings and reasons.

In reviewing the record, we observe Appellant has not presented particularized arguments with respect to the Examiner's fact findings based on Sadler, Peterson, and Howard; with respect to the Examiner's reasoning to combine Sadler's teachings with Peterson's teachings; or with respect to the Examiner's reasoning to combine Howard's teachings with the combined teachings of Sadler and Peterson. For example, in a response to the Final Action, Appellant argued the following:

Claim 1 was rejected under 35 U.S.C. 103 as being unpatentable over Sadler (USPUB201 20330448) in view of Peterson et al. (USPUB 2011/0215641) in view of Howard (USPUB2010/0006351) and in view of Floyd (2002/0063549). I do not consider this rejection to be valid since I do not recognize the above mentioned applications to be "Prior Art" and, therefore, they do not present any rationale to support the rejection of my application. My invention application must be approved on its own merits since it is complete in every detail and has no relation to the applications of Sadler, Peterson, Howard, and Floyd that expressly do not disclose all the steps and components necessary for a self-charging all electric vehicle to properly operate. Floyd reports perpetually self-chargeable batteries which would constitute a perpetual motion device.

Appellant's Response After Final Action filed July 25, 2018 ("Response") 3.

Appellant argues that Sadler, Peterson, Howard, and Floyd “expressly do not disclose all the steps and components necessary for a self-charging all electric vehicle to properly operate” and Floyd describes “perpetually self-chargeable batteries.” Response 3. However, Appellant does not offer any further explanation as to *why* the references applied by the Examiner do not teach the subject matter of Claim 1. On the other hand, the Examiner has given us explanation to support the Examiner’s position, and we are persuaded by the Examiner’s explanation.

In summary, we have considered the positions of both Appellant and the Examiner, and the Examiner has persuaded us that Claim 1 is obvious over Sadler, Peterson, and Howard.

We, therefore, sustain the Examiner’s rejection of Claim 1 as obvious over Sadler, Peterson, and Howard.

*The Obviousness Rejection of Claim 1 over Sadler, Peterson, Howard, and Floyd*

The Examiner finds Sadler, Peterson, Howard, and Floyd teach all limitations of Claim 1. Final Act. 14–17.

The Examiner makes fact findings based on Sadler, Peterson, and Howard for this ground of rejection that are the same as the fact findings based on Sadler, Peterson, and Howard for the ground of rejection discussed immediately above. *See* Final Act. 14–16.

In adding Floyd to the combination, the Examiner finds the following:

Although not expressly stated in the claim, the application makes it clear that the power which is providing charge to the battery bank, is being provided by the other battery bank through the three-wire direct current generator. The cited references do not expressly disclose charging one bank of batteries in the

vehicle from another bank of batteries in the same vehicle without an outside source of power (i.e. engine, utility power, solar, renewable, etc. . . ). Floyd discloses using a first battery in a vehicle to charge a second battery in a vehicle, and then charge the first battery with power from the second battery.

Final Act. 16 (citing Floyd ¶¶ 30, 33).

The Examiner reasons

[i]t would have been obvious to one having ordinary skill in the art at the time of this invention to take the teaching of Peterson[']s generator and floating charge method, and use it with the vehicle of Sadler in order to provide charge to the batteries, and further take the teaching of Howard and have multiple motors in order to have greater control of the rotational power provided to each of the wheels, and further take the teachings of Floyd and perpetually exchange charge between two sets of batteries in order to keep the batteries charged without the requirement of any other power source.

Final Act. 17 (citing Floyd ¶ 8).

We have reviewed the record, and to the extent Claim 1 permits merely recovering energy or moving energy around within a system rather than creating energy, we determine the evidence supports the Examiner's fact findings and reasons.

In reviewing the record, we observe Appellant has not presented particularized arguments with respect to the Examiner's fact findings based on Sadler, Peterson, Howard, and Floyd; with respect to the Examiner's reasoning to combine Sadler's teachings with Peterson's teachings; with respect to the Examiner's reasoning to combine Howard's teachings with the combined teachings of Sadler and Peterson; or with the Examiner's reasoning to combine Floyd's teachings with the combined teachings of

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Sadler, Peterson, and Howard. For example, in a response to the Final Action, Appellant argued the following:

Claim 1 was rejected under 35 U.S.C. 103 as being unpatentable over Sadler (USPUB201 20330448) in view of Peterson et al. (USPUB 2011/0215641) in view of Howard (USPUB2010/0006351) and in view of Floyd (2002/0063549). I do not consider this rejection to be valid since I do not recognize the above mentioned applications to be “Prior Art” and, therefore, they do not present any rationale to support the rejection of my application. My invention application must be approved on its own merits since it is complete in every detail and has no relation to the applications of Sadler, Peterson, Howard, and Floyd that expressly do not disclose all the steps and components necessary for a self-charging all electric vehicle to properly operate. Floyd reports perpetually self-chargeable batteries which would constitute a perpetual motion device.

Response 3.

Appellant argues that Sadler, Peterson, Howard, and Floyd “expressly do not disclose all the steps and components necessary for a self-charging all electric vehicle to properly operate” and Floyd describes “perpetually self-chargeable batteries.” Response 3. However, Appellant does not offer any further explanation as to *why* the references applied by the Examiner do not teach the subject matter of Claim 1. On the other hand, the Examiner has given us explanation to support the Examiner’s position, and we are persuaded by the Examiner’s explanation.

In summary, we have considered the positions of both Appellant and the Examiner, and the Examiner has persuaded us that Claim 1 is obvious over Sadler, Peterson, Howard, and Floyd.

We, therefore, sustain the Examiner’s rejection of Claim 1 as obvious over Sadler, Peterson, Howard, and Floyd.

CONCLUSION

Because we affirm at least one ground of rejection, the Examiner's overall decision to reject Claim 1 is affirmed.

DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>References/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1	101	Utility	1	
1	112(a)	Enablement	1	
1	103	Sadler, Peterson, Howard	1	
1	103	Sadler, Peterson, Howard, Floyd	1	
<b>Overall Outcome</b>			1	

TIME PERIOD FOR RESPONSE

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

AFFIRMED