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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JAMES V. KRAIMER, JAY G. POLLACK, TIMOTHY A.  
WELLMAN, LEWIS H. MANCI, VERNON W. SIEFRING,  
MARK E. SCHUMACHER, MATTHEW M. GREEN,  
and ANTHONY T. CASTANEDA

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Appeal 2018-004118  
Application 14/533,259  
Technology Center 2600

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Before MAHSHID D. SAADAT, CATHERINE SHIANG, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's Non-final Rejection of claims 1–20 and 22–33, which are all the claims pending in this application.<sup>2</sup> We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> According to Appellants, the real party in interest is Crown Equipment Corporation. App. Br. 3.

<sup>2</sup> Claim 21 has been cancelled previously.

## STATEMENT OF THE CASE

### *Introduction*

Appellants' Specification describes "a remote control device in combination with a materials handling vehicle." Spec. 3:25–26. Exemplary claims 1, 4, 9, and 17 under appeal read as follows:

1. A remote control device in combination with a materials handling vehicle, the combination comprising:
  - a remote control device adapted to be worn by an operator, the remote control device comprising:
    - a wireless transmitter; and
    - control structure in communication with the wireless transmitter, the control structure adapted to be actuated by the operator so as to cause the wireless transmitter to generate a travel request signal; and
  - a materials handling vehicle comprising:
    - a traction control system for advancing the vehicle across a floor surface;
    - a receiver for receiving travel request signals from the wireless transmitter;
    - at least one sensor configured to detect the presence of an object located at a position proximate to the vehicle or to detect a person on a platform of the vehicle from which the vehicle may be operated; and
    - a controller communicably coupled to the receiver, the at least one sensor, and the traction control system, the controller being responsive to receipt of the travel request signals from the receiver and to decide whether to implement each travel request signal, wherein the controller is configured to decide not to cause the traction control system to advance the vehicle across the floor surface in response to a travel request signal from the receiver if the status from one or more of the at least one sensor is indicative of the presence of either: an object located at a position proximate to the vehicle; or a person on the platform, and wherein the vehicle is configured to travel in response to

receiving a travel request signal for as long as the travel request signal is received.

4. The combination of claim 1, wherein the control structure must be double clicked by the operator at least under certain circumstances to cause the controller to implement the travel request signal.

9. The combination of claim 1, wherein the wireless transmitter of the remote control device continues to send a travel request signal for as long as the control structure is actuated by the operator's finger or thumb.

17. The combination of claim 1, wherein the at least one sensor comprises at least one object sensor configured to detect the presence of objects in the path of travel of the vehicle, and wherein the output of the at least one object sensor is overridden while the operator is driving the truck on the platform to allow the operator to navigate the vehicle in places that might otherwise activate the at least one object sensor.

#### *References and Rejections*

Claims 1–3, 5–8, and 10–16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gilliland (US 2005/0247508 A1; pub. Nov. 10, 2005), Gross (US 2005/0017858 A1; pub. Jan. 27, 2005), and McRae (US 2005/0052412 A1; pub. Mar. 10, 2005). Non-final Act. 2–9.

Claims 4, 9, 18–20, 22–31, and 33 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gilliland, Gross, McRae, and Bloch (US 6,481,525 B1; iss. Nov. 19, 2002). Non-final Act. 10–19.

Claim 17 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Gilliland, Gross, McRae, and Blakeslee (US 4,077,486; iss. Mar. 7, 1978). Non-final Act. 19–20.

Claim 32 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Gilliland, Gross, McRae, Bloch, and Blakeslee (US 2,931,117; issued Apr. 5, 1960) (“Bosworth”). Non-final Act. 20–21.

Claim 1 stands provisionally rejected under the judicially created doctrine of non-statutory obviousness-type double patenting over claim 21 of U.S. Patent No. 8,970,363 (iss. Mar. 3, 2015) in view of Gilliland. Non-final Act. 22–23.

### PRINCIPLES OF LAW

The Supreme Court has rejected the rigid requirement of demonstrating a teaching, suggestion, or motivation in the references to show obviousness. *See KSR Int’l Co., v. Teleflex Co.*, 550 U.S. 398, 415–16 (2007); *see also In re Ethicon, Inc.*, 844 F.3d 1344, 1350 (Fed. Cir. 2017) (“KSR directs that an explicit teaching, suggestion, or motivation in the references is not necessary to support a conclusion of obviousness.”). Further, one cannot show non-obviousness by attacking references individually when the rejection is based on a combination of references. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *see also In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

### ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments in Appellants’ Appeal Brief that the Examiner has erred. We are unpersuaded by Appellants’ contentions and concur with the findings and conclusions reached by the Examiner as explained below.

*35 U.S.C. § 103 REJECTIONS*

*Independent Claim 1*

In rejecting claim 1, the Examiner relies on Gilliland as disclosing all the elements of the recited system except for “the remote control devices is adapted to be worn by an operator” and “in response to a travel request signal to determine whether to advance the vehicle” according to “the status from one or more of the at least one sensor is indicative of the presence of either: an object located at a position proximate to the vehicle or a person on the platform.” Non-final Act. 2–5 (citing Gilliland Fig. 20, ¶¶ 79, 80, 85, 86, 96–98, 102). The Examiner finds Gross discloses an obstacle detection system of a vehicle that executes a movement signal based on a determination of whether an object is near the vehicle and Gilliland also discloses scanning the travelling path of the vehicle to detect obstacles. Non-final Act. 5 (citing Gross Fig. 3, ¶ 20; Gilliland ¶ 97). The Examiner further finds McRae discloses a remote control device worn by an operator that includes a wireless transmitter for operating a support structure. Non-final Act. 5–6 (citing McRae Fig. 14A, ¶ 24). The Examiner concludes it would have been obvious to one of ordinary skill in the art to combine the teachings of Gilliland with Gross and McRae to stop the travel signal from moving the vehicle if an obstacle is detected and to allow the operator not to hold onto the portable vehicle. *Id.*

Appellants contend the recited “travel request signal” is not the same as Gilliland’s beacon signal which is sent by the operator and is sensed by the truck to follow and to remain at a certain distance from the homing beacon. App. Br. 9. Appellants assert the beacon signal is different from the travel request signal that causes the vehicle “to travel in response to

receiving a travel request signal *for as long as the travel request signal is received*” because the beacon signal lacks the control structure that may be actuated by an operator. *Id.* Additionally, Appellants contend “Gilliland’s disclosure that the vehicle may not operate because the beacon signal is not received or indicates that the operator is too far away from the vehicle is not equivalent to the vehicle controller receiving a *travel request* signal . . . .” App. Br. 10.

The Examiner responds that “the vehicle is configured to travel in response to receiving a travel request signal for as long as the travel request signal is received” may be interpreted as limiting the travelling of the vehicle to “as long as the travel request signal is received.” Ans. 5. The Examiner finds Gilliland transmits a travel request signal which causes the vehicle to move as instructed and be further controlled by the beacon homing signal “involving manual operation (the turning ON and OFF) and very analogous to the operator manually issued travel request signal (i.e.,] the voice command).” Ans. 6. Lastly, the Examiner finds one of ordinary skill in the art would have understood the “the analogous beacon signal operation” as providing an example of how the movement of the vehicle takes place “for as long as the travel request signal is received,” as recited in claim 1. *See* Ans. 6–7.

We agree with the Examiner that Gilliland discloses a control structure that wirelessly transmits a “travel request signal” actuated by an operator, using either a remote control or voice activation, causing the vehicle control structure to move the vehicle along the floor. *See* Gilliland ¶¶ 79–80. The Examiner also correctly relies on the homing beacon signal as a safeguard system for avoiding the vehicle movement when the operator

is too far from the vehicle. *See* Gilliland ¶¶ 96–102. The reference provides examples of the limiting elements to ensure the vehicle stops when an obstacle is detected or if the operator is too far away, which can be reasonable interpreted as the disputed limitation of “the vehicle is configured to travel in response to receiving a travel request signal/or as long as the travel request signal is received.”

Contrary to Appellants’ discussion of whether the disputed limitation requires continuous transmission (*see* App. Br. 12) or relates to duration or condition (*see* Reply Br. 2–3), Gilliland identifies the beacon signal, not as the travel request signal by itself, but as an additional signal that is a part of the travel request signal and safeguard the vehicle movement in situations when the operator is too far away. We understand the Examiner’s characterization of the homing beacon signal not as the “travel request signal,” but as a part of it which, in combination with the control signal sent by the operator, causes the vehicle to travel along the floor. That is, the vehicle is configured to travel as long as the control signal and the beacon homing signal, which is present only if the operator is within a certain distance from the vehicle, are received by the vehicle.

We therefore are unpersuaded by Appellants’ arguments the proposed combination of Gilliland with Gross and McRae does not render obvious the subject matter of claim 1.

#### *Dependent Claim 4*

In rejecting claim 4, the Examiner further relies on Bloch as disclosing a control structure that is activated by double clicking under a set of circumstances that cause the controller to provide the travel request signal. Non-final Act. 10. Appellants contend “the double clicking in Bloch

for altering the steering position of a wheel is not equivalent to double clicking of a control structure to cause the controller to implement a travel request signal to advance the vehicle across a floor surface as claimed by the Appellant.” App. Br. 13.

As explained by the Examiner, Appellants’ arguments ignore the Examiner’s reliance on the combination of the references. That is, “Gilliland discloses transmitting by a wireless controller to a material handling vehicle a travel request signal for the vehicle move” and “Bloch discloses it has been known to allow a command to be transmitted to a material handling vehicle by double clicking on a button of the material handling vehicle.” Non-final Act. 10 (citing Bloch 1:52–59), Ans. 8. As further explained by the Examiner, Bloch provides an alternate trigger mechanism for sending a command to a control structure. Ans. 8.

Accordingly, we are unpersuaded by Appellants’ arguments the proposed combination of Gilliland with Gross, McRae, and Bloch does not render obvious the subject matter of claim 4.

*Dependent Claim 9*

Appellants contend the Examiner’s citation of Bloch’s disclosure of changing the steering for as long as the direction key is pressed is not sufficient to show “the wireless transmitter of the remote control device continues to send a travel request signal for as long as the control structure is actuated.” App. Br. 14. The Examiner finds, Bloch, with respect to transmitting a command to the vehicle, teaches continuous transmission of the command “as long as a button is pressed by a user.” Non-final Act. 11 (citing Bloch 5:7–11), Ans. 9.

As explained by the Examiner, the rejection is based on the combination of the references, with each reference teaching different features of the claim. Ans. 9 (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986)). We also agree with the Examiner that although “the commands are different commands, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention that the manner in which the commands are delivered can be via pressing of the button or holding down of the button as taught by the combination of Gilliland and Bloch.” Ans. 10.

Accordingly, we are unpersuaded by Appellants’ arguments the proposed combination of Gilliland with Gross, McRae, and Bloch does not render obvious the subject matter of claim 9.

*Independent Claim 18*

Similar to the arguments made for claims 1 and 4, Appellants contend the Examiner’s citation of Bloch’s double clicking does not teach or suggest the recited limitations of claim 18. App. Br. 14–16. The Examiner finds, Bloch, with respect to transmitting a command to the vehicle, teaches continuous transmission of the command “as long as a button is pressed by a user.” Non-final Act. 11 (citing Bloch 5:7–11), Ans. 9.

As explained by the Examiner, Appellants’ arguments are against the references individually whereas the rejection is based on the combination of the references. Ans. 11 (citing *Keller*, 642 F.2d 413; *Merck*, 800 F.2d 1091). We also agree with the Examiner’s finding that “Gilliland transmits a signal to command the vehicle to move and Bloch transmits a command signal for the vehicle wheel to steer in a certain direction which may or may not coincide with vehicle forward motoring” and therefore, “the combination of

Gilliland and Bloch discloses double clicking of a control structure to cause the controller to implement a travel request signal to advance the vehicle across a floor surface.” *Id.*

Accordingly, we are unpersuaded by Appellants’ arguments the proposed combination of Gilliland with Gross, McRae, and Bloch does not render obvious the subject matter of claim 18.

*Dependent Claim 17*

Claim 17 depends from claim 1 and further requires “at least one sensor comprises at least one object sensor configured to detect the presence of objects in the path of travel of the vehicle, and wherein the output of the at least one object sensor is overridden while the operator is driving the truck on the platform to allow the operator to navigate the vehicle in places that might otherwise activate the at least one object sensor.” App. Br. 23. The Examiner finds, in addition to Gilliland, Gross and McRae, Blakeslee discloses an automatic sensor/override mode that may be selected by an operator. Non-final Act. 19–20. Appellants contend Blakeslee relates to an override mode in a self-powered vehicle, whereas claim 17 requires “the output from at least one object sensor is overridden, wherein such output from the at least one sensor would otherwise cause the vehicle controller to refuse to implement a travel request signal if the output was indicative of an object in the path of travel of the vehicle,” when an operator is driving the truck on the platform. App. Br. 18.

As explained by the Examiner, Gilliland was relied on as disclosing that a sensor guides the material handling vehicle and an obstacle detection system stops the vehicle when an obstacle is detected in the path of the vehicle, which may be in a manual or automatic mode of operation. Ans. 15

(citing Gilliland ¶¶ 97, 100, 102). As further explained by the Examiner, Blakeslee discloses using a sensor “in guiding the vehicle in a warehouse system to turn off the sensors when the vehicle is switched from automatic mode to manual mode.” Ans. 16 (citing 6:41–63). The Examiner further explains that such combination would have suggested to one of ordinary skill in the art “to determine whether an object is in the truck path to be turned off too, to allow the user to use his/her human senses (i.e., sight) to determine whether the truck should be stopped.” *Id.*

Accordingly, we are unpersuaded by Appellants’ arguments the proposed combination of Gilliland with Gross, McRae, and Blakeslee does not render obvious the subject matter of claim 17.

*Remaining Claims*

Appellants contend the rejections of these claims are in error based on reasons similar to those presented for claims 1, 4, 9, 17, and 18. *See* App. Br. 12–20. Based on the analysis above and for similar reasons stated for claims 1, 4, 9, 17, and 18, we are not persuaded of Examiner error and agree with the Examiner’s findings and analysis with respect to the teachings of Gilliland with Gross, McRae, Bloch, and Blakeslee. *See* Non-final Act. 6–21.

*NON-STATUTORY OBVIOUSNESS-TYPE DOUBLE  
PATENTING REJECTION*

Appellants state that the cited rejection over claim 21 of U.S. Patent No. 8,970,363 in view of Gilliland is in error because claim 21 does not disclose “the vehicle is configured to travel in response to receiving a travel request signal for as long as the travel request signal is received” and

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Gilliland fails to cure this deficiency. App. Br. 20. Based on the Examiner's findings and our analysis of Gilliland above, we are unpersuaded of the Examiner's error in claim 1's nonstatutory double patenting rejection. Thus, we sustain the rejection of claim 1 on the ground of nonstatutory double patenting over claim 21 of U.S. Patent No. 8,970,363 in view of Gilliland.

#### DECISION

We affirm the Examiner's rejection of claims 1–20 and 22–33 under 35 U.S.C. § 103(a).

We affirm the Examiner's rejection of claims 1 on the ground of nonstatutory double patenting.

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