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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEVIN POTUCEK, GREGORY FOURNIER,
JAMES MURDOCK, ROBERT HEON, DAVID BLAINE,
CRAIG HORROCKS, KENNETH JR. WHITE,
MURAT DYMOV, MICHAEL NILSSON,
THOMAS-ERIC BELIVEAU, DEYIN XU,
PATRICK MAINVILLE, QIWEI HUANG,
and LINNETTE RIVERA

Appeal 2018-004939
Application 14/211,461¹
Technology Center 2100

Before JAMES R. HUGHES, ERIC S. FRAHM, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

McNEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a rejection of claims 1–30, which are all the pending claims in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

¹ According to the Appeal Brief, the real party in interest is Hayward Industries, Inc. App. Br. 3.

STATEMENT OF THE CASE

Introduction

Appellants' application relates to a pool/spa control system that includes modular relay packs so as to be easily expandable to accommodate various types of pool/spa equipment. Spec. 1:26–28. An exemplary control system includes a main panel and a connected expansion panel, where modular relay packs may be installed in both the main panel and expansion panel. Spec. 19:5–20. Each relay in each relay pack can be assigned a desired function, such as for controlling a pool heater, a light, a circulation pump, etc. Spec. 19:21–20:3. The relay packs may allow for “plug-and-play” installation and configuration. Spec. 20:8. The control system may include a GUI for the user to control pool/spa components, where the GUI may be divided into multiple sections corresponding to different bodies of water. *See* Spec. 72:5–73:15; Fig. 17A. Independent claims 1 and 11, reproduced below, are illustrative of the claimed subject matter:

1. A system for controlling a plurality of pool/spa components, the system including a display screen and one or more processors presenting a control user interface for display on the display screen, wherein the control user interface includes:

a first control section containing a first plurality of controls for controlling a first group of the plurality of pool/spa components associated with a first body of water, and

a second control section adjacent to said first control section, the second control section containing a second plurality of controls for controlling a second group of the plurality of pool/spa components associated with a second body of water.

App. Br. 26 (Claims Appendix).

11. A system for controlling pool/spa components, the system comprising one or more processors configured to,

receive information identifying a modular relay pack removably connected to a pool/spa controller, the modular relay pack comprising a plurality of relays including a first relay and a second relay;

perform a first assignment of the first relay to a first pool/spa component;

perform a second assignment of the second relay to a second pool/spa component;

cause a display to present a control user interface comprising a plurality of buttons and/or controls including a first button and/or control and a second button and/or control;

receive, via the user interface, a first input activating the first button and/or control; based on the first input and the first assignment, send a first control signal to control the first pool/spa component;

receive, via the user interface, a second input activating the second button and/or control; and

based on the second input and the second assignment, send a second control signal to control the second pool/spa component.

App. Br. 27–28 (Claims Appendix).

The Examiner's Rejections

Claims 1–3, 5, 6, 9, 10, and 23² stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Emery et al. (US 2007/0106403 A1; May 10, 2007) and Humpleman et al. (US 6,603,488 B2; Aug. 5, 2003).

Claims 4 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Emery, Humpleman, and Wimsatt (US 2004/0260427 A1; Dec. 23, 2004).

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Emery, Humpleman, and Heninwolf (US 2014/0091923 A1; Apr. 3, 2014).

Claims 11–16, 18, 19, 21, and 24–30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Emery, Perez, and Gilstrap (US 2011/0015797 A1; Jan. 20, 2011).

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Emery, Perez, Gilstrap, and Wimsatt.

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Emery, Perez, Gilstrap, and Wallace (US 2014/0034562 A1; Feb. 6, 2014).

Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Emery, Perez, Gilstrap, and Clark et al. (US 2010/0138007 A1; Jun. 3, 2010).

² The Examiner states that claim 24 is rejected over Emery and Humpleman. *See* Non-Final Act. 15, 18. However, the limitations discussed in the rejection are recited in claim 23 (*see* Non-Final Act. 18; App. Br. 30 (Claims Appendix)), and thus we deem claim 23, not claim 24, to have been rejected over Emery and Humpleman. Claim 24 is rejected over Emery, Perez, and Gilstrap. Non-Final Act. 20, 23.

ANALYSIS

Claims 1–10 and 23

Regarding claim 1, Appellants argue that in Emery’s control system “the menus for the separate pool and spa are all commingled together and not presented in a single user interface display that includes a first section having controls for a first body of water adjacent to a second section having controls for a second body of water.” App. Br. 12. Appellants argue Humpleman does not cure this deficiency of Emery because, while Humpleman describes separate control sections 706 and 708 in Figure 11, the control sections are each able to control only one component, in contrast to claim 1, which requires each control section be able to control multiple components. *See* App. Br. 13; Reply Br. 6. Additionally, Appellants argue Humpleman is not analogous art. App. Br. 14–15; Reply Br. 7. We are not persuaded by Appellants’ arguments.

Emery describes a system for controlling pool and spa settings and operations. Emery, Abstract. The system includes a command center board that controls “operation of electrical devices such as (but not necessarily limited to) pumps, valve actuators, heaters, blowers, lights, or other pool, spa, or recreational equipment.” Emery ¶ 34. A user interfaces with the command center board through, for example, a liquid crystal display (LCD) with light-emitting diode backlighting. *Id.* Emery’s user interface can provide a user with a main menu from which “the user may view and manually change the operational state of devices and may set device schedules.” Emery ¶ 64; Fig. 9. For example, the main menu provides controls for changing the setpoint temperatures of both a pool and a spa. *See* Emery, Fig. 9. Emery’s user interface can also provide a user with a

“Watermatic” menu for a pool or spa through which “a user may, if desired, manually initiate automatic dispensing of chemicals to affect the ORP [oxidation-reduction potential], pH, or both of the relevant water.” Emery ¶ 65; Fig. 10. We agree with the Examiner (*see* Ans. 5–9) that Emery’s description of menus for controlling pool and spa devices, for example, the “Watermatic” menus, teaches the claim 1 limitations of:

[A] control user interface for display on the display screen, wherein the control user interface includes: a first control section containing a first plurality of controls for controlling a first group of the plurality of pool/spa components associated with a first body of water, and a second control section . . . containing a second plurality of controls for controlling a second group of the plurality of pool/spa components associated with a second body of water.

That is, Emery’s “Watermatic” menu for each of the pool and spa teaches the respective “first control section” and “second control section.”

Appellants’ Reply Brief does not specifically argue that Emery’s “Watermatic” menus are not control sections, but in arguing that Emery fails to teach a “first control section” and “second control section,” Appellants highlight Figure 17A of the present application. *See* Reply Br. 4–5. To the extent Appellants’ Figure 17A shows exemplary first and second control sections, we note that both Appellants’ Figure 17A control sections and Emery’s “Watermatic” menus include controls for controlling pH and ORP. *See* Drawings, Fig. 17A; Emery, Fig. 10; ¶ 65. In other words, the features Appellants rely on to demonstrate the claimed control sections are described in Emery.

Although the Examiner finds that Emery does not explicitly describe first and second control sections adjacent to one another (Non-Final Act.

15), we note that Emery’s display of pool and spa setpoint temperature controls on the same main menu (*see* Emery, Fig. 9) at least suggests displaying controls for a pool and a spa adjacent to one another. Nevertheless, the Examiner relied upon Humpleman for the “adjacent” feature in claim 1. *See* Non-Final Act. 15. Humpleman describes a system for controlling diverse home devices in a home network, where the home network provides a user with a GUI for controlling the home devices. Humpleman, Abstract; col. 4, ll. 31–47. The GUI can include two frames 706 and 708 that display respective home pages for controlling respective first and second devices. Humpleman, col. 15, l. 64–col. 18, l. 17; Figs. 10, 11. We find that Humpleman’s Figure 11 showing frames 706 and 708 for controlling respective first and second devices teaches adjacent first and second control sections, as recited in claim 1.

We agree with the Examiner’s conclusion (*see* Non-Final Act. 16; Ans. 8–10) that it would have been obvious, in view of Humpleman, to place a menu with controls for pool devices (for example, the “Watermatic#1” menu (Emery, Figs. 1, 10; ¶ 65)), adjacent to a menu with controls for spa devices (for example, the “Watermatic#2” menu (Emery, Fig. 1; ¶ 65)) in Emery’s user interface. Not only does Emery suggest displaying pool and spa controls adjacent to one another (*see* Emery, Fig. 9), but Humpleman teaches placing whole control sections for different entities adjacent to one another. *See* Humpleman, Fig. 11. Moreover, Appellants have not shown rearranging the display of menus in a GUI in this manner would have been “uniquely challenging or difficult for one of ordinary skill in the art.” *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (2007). Appellants’ argument that Humpleman only shows control sections that

control one component, whereas claim 1 requires control sections that control multiple components (*see* App. Br. 13), is not persuasive. As discussed above, Emery discloses the “Watermatic” menus for the pool and spa include multiple controls, namely, to “manually initiate automatic dispensing of chemicals to affect the ORP [oxidation-reduction potential], pH, or both of the relevant water.” Emery ¶ 65; Fig. 10. Humpleman is only relied upon to suggest placing control sections adjacent to one another. *See* Non-Final Act. 15; Ans. 9.

Additionally, we agree with the Examiner that Humpleman is analogous art. *See* Ans. 10.

Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.

In re Klein, 647 F.3d 1343, 1348 (Fed. Cir. 2011) (citation omitted).

As the Examiner finds, both Humpleman and Appellants’ invention are in the field of endeavor relating to “automation control for appliance[s].” *Id.* The fact that Humpleman does not expressly name pool and spa components among the home devices that may be controlled does not change the analysis. The Examiner properly defines Appellants’ field of endeavor to be broader than just pool and spa controllers because aside from nominally limiting the claimed invention to controls for pool/spa components, claim 1 is essentially drawn to a user interface and does not recite specific structures or functions that preclude use outside the realm of pools and spas. In any case, even if Humpleman were considered to be in a

different field of endeavor, the Supreme Court “directs us to construe the scope of analogous art broadly, stating that ‘*familiar items may have obvious uses beyond their primary purposes*, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.’” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (2010) (citation omitted). We find one seeking to solve the problem of arranging controls for different components used in pools and spas on a user interface would have looked to user interfaces for controlling other types of devices because user interface designs can be broadly applicable to devices in disparate fields of technology.

We are, therefore, not persuaded the Examiner erred in rejecting claim 1, and claims 2–10 and 23 not specifically argued separately.

Claims 11–21 and 24–30

Regarding claim 11, Appellants argue that the combination of Emery, Perez, and Gilstrap fails to disclose the following claim limitations:

perform a first assignment of the first relay to a first pool/spa component;

perform a second assignment of the second relay to a second pool/spa component;

...

based on the first input and the first assignment, send a first control signal to control the first pool/spa component;

...

based on the second input and the second assignment, send a second control signal to control the second pool/spa component.

App. Br. 17. Specifically, Appellants argue:

the “assignment” as discussed in Gilstrap is very different than the “assignment” as claimed in Claim 11. Claim 11 requires a relay to be assigned to a pool or spa component. However, in Gilstrap, assigning relays, and assignment of other items, relates to assignment to an “area,” rather than a specific pool or spa component as required by the claims.

App. Br. 18–19; *see also* Reply Br. 8–9. Further, Appellants argue Gilstrap fails to teach “based on the assignment, sending a control signal to the pool/spa component. The assignment as disclosed in Gilstrap is merely for organization purposes for assignment to an ‘area,’ and is not necessary to control any particular device.” App. Br. 19. Appellants also argue neither Perez nor Gilstrap are analogous art. App. Br. 19–20; Reply Br. 9. Finally, Appellants argue the Examiner’s rationale for modifying the teachings of Emery in view of Perez and Gilstrap is improperly based on hindsight reasoning. App. Br. 20–21. We are not persuaded by Appellants’ arguments.

Appellants’ arguments that Gilstrap fails to teach assigning relays to pool or spa components and sending control signals to the components based on the assignments (App. Br. 18–19), are not persuasive because the Examiner relies on the collective teachings of Emery and Gilstrap for disclosing the argued claim 11 features. To wit, the Examiner finds Emery teaches using relays for controlling pool and spa components, but does not explicitly teach assigning the relays to pool and spa components. *See* Non-Final Act. 20–23. The Examiner then finds Gilstrap teaches assigning relays to specific components. *See id.* In the Examiner’s combination, the resulting control system with relays assigned to specific pool and spa

components would function to actually send control signals to the pool and spa components. Appellants' argument that Gilstrap only teaches assigning relays to an area and not particular devices is not persuasive. App. Br. 19. Gilstrap's Figure 7 shows a process for assigning a relay to a device by selecting a specific device and a specific relay. *See* Gilstrap, Fig. 7; ¶69.

We are also not persuaded by Appellants' argument that neither Perez nor Gilstrap are analogous art. App. Br. 19–20. Rather, we agree with the Examiner that both Perez and Gilstrap are in Appellants' field of endeavor, namely, "automation control for devices." Ans. 14. We are not persuaded by Appellants' arguments that Perez "is merely concerned with the design of irrigation controllers, not pool/spa components" and that Gilstrap "relates to home automation and energy conservation systems." App. Br. 19. First, we note that Gilstrap's home automation system does in fact relate to controlling pool and spa components: "Other components and component interfaces may also be controlled with the controller 12. For example, serial-based components, such as . . . pool and spa equipment 28, may be coupled to a serial interface 30 that is in communication with the controller 12." Gilstrap ¶ 47. Second, although the claimed invention is nominally limited to controlling pool and spa components, Appellants' field of endeavor can reasonably be defined more broadly than pool and spa controllers. Claim 11, for instance, focuses on assigning relays in a modular relay pack for controlling pool and spa components. But claim 11 does not recite specific structures or functions of the modular relay pack that

preclude its use in controllers for controlling devices other than pool and spa components. Accordingly, we find Perez, which relates to an irrigation controller with “a base unit with a removable and programmable control panel and backplane circuitry for communicating with a plurality of removable modules,” is also in Appellants’ field of endeavor.

Finally, we are not persuaded by Appellants’ argument that the Examiner’s combination is based on improper hindsight reasoning. App. Br. 20–21. Appellants’ combination argument essentially reprises the analogous art argument by asserting “[o]ne of ordinary skill in the art would not find it obvious the [sic] combine the prior art references because, as noted above, they relate to completely different fields.” App. Br. 20. As stated above, we find Perez and Gilstrap are within Appellants’ field of invention as defined in a reasonably broad manner. The Examiner’s combination of Perez with Emery to make Emery’s control system expandable with removable modules, and combination of Gilstrap with Emery and Perez to show that in order to make use of Emery’s relays, one would have to actually assign the relays to specific components, “‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417 (2007).

We are, therefore, not persuaded the Examiner erred in rejecting claim 11, and claims 12–21 and 24–30 not specifically argued separately.

Claim 22

Regarding claim 22, Appellants argue, among other things, that Clark fails to teach “the group of buttons and/or controls is automatically updated to include an additional button and/or control.” We are persuaded by Appellants’ argument.

Clark describes a “domotics system . . . for automatically discovering devices to add to or modify on a home automation system.” Clark, Abstract. In an embodiment, a user can build a scene by selecting a room in a home and set up devices, such as lights, in the room. *See* Clark ¶ 48. Clark’s Figure 8B shows that the interface for building a scene includes a button to “Add Light.” Clark, Fig. 8B; ¶ 48. We find the Examiner’s reliance on Clark’s “Add Light” button for meeting the claimed feature of automatically updating a group of buttons or controls (Ans. 17–18), to be misplaced. Clark’s Figure 8B shows that a user must select the existing “Add Light” button in the scene building interface to add a new light to a scene, and does not show that a new button or control is automatically added to the interface for a discovered lighting device. *See* Clark ¶ 48.

We are, therefore, constrained by the record to find the Examiner erred in rejecting claim 22.

DECISION

We affirm the Examiner’s decision to reject claims 1–21 and 23–30, but we reverse the Examiner’s decision to reject claim 22.

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. § 41.50(f).

Appeal 2018-004939
Application 14/211,461

AFFIRMED-IN-PART