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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDRZEJ ERNEST KUCZEK, ENRICO MANES,
and JOSEPH C. RAMPONE

Appeal 2019-004533
Application 15/254,615
Technology Center 2800

Before MICHAEL P. COLAIANNI, DEBRA L. DENNETT, and
MERREL C. CASHION, JR., *Administrative Patent Judges*.

DENNETT, *Administrative Patent Judge*.

DECISION ON APPEAL¹

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner's decision to reject claims 1–19. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

¹ In our Decision, we refer to the Specification (“Spec.”) of Application 15/254,615 filed Sept. 1, 2016; the Final Office Action dated Feb. 22, 2018 (“Final Act.”); the Advisory Action dated May 8, 2018 (“Adv. Act.”); the Appeal Brief filed July 5, 2018 (“Appeal Br.”); and the Examiner’s Answer dated Oct. 25, 2018 (“Ans.”). Appellant did not file a Reply Brief.

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Otis Elevator Company. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The subject matter of the invention relates to ropeless elevator systems (also known as self-propelled elevator systems) for use in applications where the mass of ropes for a roped system is prohibitive and there is a desire for multiple elevator cars to travel in a single lane. Spec.

¶ 3. The invention involves at least one transfer station in a hoistway to move elevator cars horizontally between a first and second lane. *Id.*

Claim 1, reproduced below, illustrates the claimed subject matter:

1. A ropeless elevator system comprising:
 - an elevator car constructed and arranged to move along a hoistway and into a transfer station in communication with the hoistway;
 - an electronic controller configured to control speed of the elevator car when at least in the transfer station; and
 - a first detector supported by the elevator car and configured to send a first signal to the electronic controller at least in-part indicative of a presence in the elevator car, and wherein the electronic controller outputs a speed control signal indicative of the presence.

Appeal Br. 12 (Claims App.).

REFERENCES

The Examiner relies on the following prior art in rejecting the claims:

Name	Reference	Date
Cominelli	US 5,241,141	Aug. 31, 1993
Kiji et al. (“Kiji”)	US 5,865,274	Feb. 2, 1999
Park et al. (“Park”)	US 5,884,729	Mar. 23, 1999
Lindberg et al. (“Lindberg”)	US 7,448,473 B2	Nov. 11, 2008
Chen	US 2013/0233653 A1	Sept. 12, 2013
Schuster et al. (“Schuster”)	US 8,540,057 B2	Sept. 24, 2013

REJECTIONS

The Examiner maintains the following rejections under 35 U.S.C.

§ 103:³

- A. Claims 1, 2, 8, 13, 14, and 16 over Kiji in view of Cominelli;
- B. Claims 3, 6, 7, and 15 over Kiji modified by Cominelli, and further in view of Chen; and
- C. Claims 4 and 5 over Kiji modified by Cominelli, and further in view of Schuster;
- D. Claims 9 and 17 over Kiji modified by Cominelli, and further in view of Park;
- E. Claims 10–12, 18, and 19 over Kiji modified by Cominelli and Park, and further in view of Lindberg. Final Act. 3–15.

³ Because this application was filed after the March 16, 2013, the effective date of the America Invents Act, we refer to the AIA version of the statute.

OPINION

A. Rejection of claims 1, 2, 8, 13, 14, and 16 over Kiji in view of Cominelli

In response to this rejection, Appellant argues claim 1 and its dependent claims 2 and 8 as a group. Appeal Br. 4–8. Appellant’s arguments relating to claim 13 are not substantively different from those addressed to claim 1. *See id.* at 8. We select claim 1 as representative of the group. Claims 2, 8, 13, 14, and 16 will stand or fall with claim 1.

With respect to claim 1, the Examiner finds that Kiji discloses a ropeless elevator system as claimed, except the reference fails to disclose that (1) the electronic controller controls speed of the elevator car when at least in the transfer station; (2) the first detector is supported by the elevator car that detects a presence in the elevator car; and (3) the electronic controller outputs a speed control signal indicative of the presence. Final Act. 3. The Examiner finds that Cominelli teaches an elevator in which a first detector is supported by an elevator car, and an electronic controller to output a speed control signal relating to a motion profile, indicative of a presence of passengers in the elevator car. *Id.*

The Examiner determines that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kiji’s ropeless elevator system by supporting the first detector by the elevator car, and having the electronic controller output a speed control indicative of the presence. *Id.* According to the Examiner, the electronic controller then would control speed of the elevator car when in the transfer station based on the indication of a presence, which would “reduce elevator flight time when there are no passengers in the elevator car.” *Id.* at 3–4 (quoting Cominelli col. 2, ll. 35–38).

Appellant argues that Kiji is concerned with management and separation of cars between hoistways and transfer station, and does not teach detecting a presence in an elevator car. Appeal Br. 5. Appellant argues that Cominelli teaches detecting a presence in an elevator car, but not for the purpose of car separation. *Id.* Appellant contends, therefore, that there is no teaching or motivation to combine Kiji with Cominelli, and “in certain scenarios, Kiji teaches away from the suggested combination.” *Id.* at 4.

Appellant’s arguments regarding what Kiji and Cominelli separately disclose fails to address the rejection, which is based on a *combination* of the references. “Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.” *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Each reference cited by the Examiner must be read, not in isolation, but for what it fairly teaches in combination with the prior art as a whole. *See id.*

The Examiner provides adequate motivation to combine the references. Kiji and Cominelli both describe elevator systems in which movement of an elevator car is controlled based on at least speed and load. *See* Ans. 2–3 (citing Cominelli col. 2, ll. 41–43, col. 3, ll. 50–61; Kiji col. 37, ll. 16–18; col. 9, ll. 67–col. 10, l. 6). The Examiner’s determination that the combination of Kiji and Cominelli—which would provide an electronic controller that controls the speed of an elevator car based on the signal indicative of the presence when in a transfer station signal—would reduce elevator flight time when there are no passengers in the elevator car. Final Act. 3–4. Such analysis satisfies the required “some articulated reasoning

with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

Appellant’s assertion that Kiji “teaches away” is unpersuasive. *See* Appeal Br. 5. Teaching away requires that a reference “criticize, discredit, or otherwise discourage the solution claimed.” *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Appellant posits that the objectives of Kiji and Cominelli can work against each other by asserting that car separation does not mean optimal occupant comfort and occupant comfort does not mean optimal car separation. Appeal Br. 5. However, such disclosure falls far from criticizing, discrediting, or discouraging the solution claimed. Kiji cannot be said to teach away from the claim 1.

Appellant argues that “load” in Kiji means “system load,” and could be the electrical load placed on electrical motors or drives. *Id.* at 5–6. Appellant then argues that any detection of load and/or weight by Kiji is for the purpose of determining the limits of car speed for a given system load. *Id.* at 6. We disagree.

Kiji discloses a car data detection device for detecting elevator car data that indicates each car’s position, moving speed, and weight/load. Kiji only uses the term “load” when describing a state or status of each elevator car. Kiji col. 9, ll. 65–67 (car data indicates each car’s position, moving speed, and weight), col. 37, ll. 16–18 (car data detection device detects for each car the position, speed, and load), and col. 73, ll. 17–18 (car data detection device detects status, e.g., position, speed, and load, of each car). Thus, Kiji uses “weight” and “load” interchangeably.

According to the Examiner, when describing a state or status of an elevator car, it is common for an elevator system to determine whether the

elevator car is moving, whether the elevator car doors are open, and whether or not the elevator car is fully loaded, i.e., at full occupancy. Ans. 9. “Each of these factors contributes to a decision by the elevator system as to whether or not a specific elevator car should be assigned to a newly registered elevator service request, thereby affecting travel operations of the elevator car.” *Id.* An elevator car’s load is very commonly used within the art to describe a weight of the elevator car, and such weight would be affected by the number of passengers within the elevator car. *Id.* at 8. Cominelli supports this interpretation of “load”:

In logic block 2 the question of whether the load in the car is indicative of passengers is asked to determine if the car is occupied or not. If the car is occupied or if there is additional weight above and beyond that of the car itself, it is desirable not to operate the car at the high performance profile which may be uncomfortable to passengers. Consequently, if the loadweighing device does indicate that passengers are present, then the comfortable profile having lower acceleration and jerk rates is utilized.

Cominelli col. 5, ll. 43–52.

The elevator control subsystem as set forth in claim 8 including load sensors for determining changes in weight of the elevator car and wherein a signal indicative that the elevator car is occupied further comprises a load signal generated by the load sensor.

Id., col. 7, ll. 30–34

One of ordinary skill in the art at the time of the invention would understand the weight/load detected in Kiji to be the weight of passengers or materials within the elevator car. Thus, Appellant’s contention that “load” in Kiji means *system* load and Kiji would not detect the weight of a presence (such as a passenger) because such weight “is likely to be greatly

overshadowed by other factors that contribute to system load” is unpersuasive. Appeal Br. 7.

Appellant argues that Cominelli does not teach a transfer station, therefore, cannot teach “the electronic controller to control speed of the elevator car when at least in the transfer station.” Appeal Br. 7. This argument ignores the combined teachings of the references. As the Examiner explains in the Answer, Kiji discloses an elevator system in which an elevator car is controlled to move into and through a transfer station during operation, and Cominelli discloses a well known electronic controller to control *speed* of an elevator car during its operation. Ans. 14–15. The combined references teach an electronic controller that controls speed of an elevator when in the transfer station. As discussed above, attacking references individually does not show nonobviousness where the rejection is based upon the teachings of a combination of references. *Merck*, 800 F.2d at 1097. Moreover, Appellant does not explain adequately why one skilled in the art, using no more than ordinary creativity, would not have been able to modify Cominelli’s controller to control speed of an elevator when in the transfer station. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”); *see also In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985) (presuming skill on the part of one of ordinary skill in the art).

On the record before us, we sustain the rejection of claim 1. For the same reasons, sustain the rejection of claims 2, 8, 13, 14, and 16.

B. Rejection of claims 3, 6, 7, and 15 over Kiji as modified by Cominelli, and further in view of Chen

The Examiner rejects claims 3, 6, 7, and 15 over Kiji in view of Cominelli, further in view of Chen. Final Act. 6–9. The Examiner finds that

Chen discloses a video detector (claim 3), a visual detector (claim 6), an alarm device (information signal of claim 7), and a detector to detect the presence of a human (claim 15). *Id.*

Appellant addresses arguments only to the rejection of claim 3. In relation to claim 3, the Examiner finds that the first detector of the system of Kiji as modified by Cominelli and Chen would include a video detector. Final Act. 6. The Examiner determines that the combined references would increase efficiency of the elevator system by preventing an elevator car from stopping in response at a floor in response to a pressed up or down button when there is not enough room in the elevator car for additional passengers. *Id.*

Appellant contends that the Examiner does not provide adequate motivation to combine Chen, stating, “Applicant fails to see any synergy.” Appeal Br. 9. Appellant argues that the combination would require a complete replacement of the car detection device of Kiji with the video camera of Chen, “caus[ing] Kiji not to work because it could not adequately determine system load.” *Id.*

As the Examiner explains in the Answer, the combination of references incorporates the car data detector of Kiji as modified by Cominelli along with the video camera of Chen. Ans. 17. Thus, no “complete replacement” of Kiji’s car detection device—as modified by Cominelli—would be required, and Kiji would still be able to determine load. Ans. 18.

The Examiner’s explanation for combining Chen with Kiji and Cominelli provides some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *See Kahn*, 441

F.3d at 988. A combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). “When a work is available in one field, design incentives and other market forces can prompt variations of it, either in the same field or in another. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability.” *Id.* Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person’s skill. *Id.* We find no support that the combination would be beyond the capability of a person having ordinary skill in the art.

We sustain the rejection of claim 3.

We sustain the rejection of claims 6, 7, and 15, as Appellant’s only argument for their patentability is based on their dependence from an allowable claim.

C. Rejection of claims 4 and 5 over Kiji as modified by Cominelli, and further in view of Schuster

The Examiner rejects claims 4 and 5, both requiring an infrared detector over Kiji in view of Cominelli, further in view of Schuster. Final Act. 9–11. The Examiner finds that Schuster, which is directed to generating elevator installation maintenance information, discloses a first detector with an infrared sensor. *Id.* at 9–10.

Appellant relies on the arguments made in relation to claim 3 to support patentability of claims 4 and 5. Appeal Br. 9–10. Because these

arguments were unpersuasive of reversible error, we sustain the rejection of claims 4 and 5.

D. Rejection of claims 9 and 17 over Kiji as modified by Cominelli, and further in view of Park

Claim 9 requires that the electronic controller of the elevator system is configured to output an indeterminate signal to the drive device when the presence is indeterminate and the drive device is constructed and arranged to stop the elevator car upon receipt of the indeterminate signal. Appeal Br. 13 (Claims App.). Claim 17 requires automatically stopping the elevator car by the controller and prior to moving the elevator car into the transfer station when the presence in the elevator car is indeterminate. *Id.* at 14.

The Examiner rejections claims 9 and 17 over Kiji in view of Cominelli, and further in view of Park. The Examiner finds that Park discloses an elevator system in which an electronic controller outputs an indeterminate signal indicating an error and a drive device halts the elevator car upon receipt of the indeterminate signal. Final Act. 11–12.

Appellant contends that Kiji would not work in combination with Park because the signal in Kiji would always be an indeterminate signal and the elevator car would never move. Appeal Br. 10. Appellant’s argument is based on Appellant’s position that the load in Kiji must be a system load, and such a system load cannot detect “a presence,” such as by weight of the presence. Having found this argument unpersuasive in our discussion of the rejection of claim 1, we sustain the rejection of claims 9 and 17.

E. Rejection of claims 10–12, 18, and 19 over Kiji as modified by Cominelli and Park, and further in view of Lindberg

Appellant argues that claims 2, 5–8, 10–12, 15, 16, 18, and 19 are patentable because they depend from patentable claims. Appeal Br. 10.

Having found none of the claims from which claims 2, 5–8, 10–12, 15, 16, 18, and 19 to be patentable over the cited prior art, we sustain the rejection of the claims.

CONCLUSION

The Examiner’s decision to reject claims 1–19 is affirmed.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 2, 8, 13, 14, 16	103	Kiji, Cominelli	1, 2, 8, 13, 14, 16	
3, 6, 7, 15	103	Kiji, Cominelli, Chen	3, 6, 7, 15	
4, 5	103	Kiji, Cominelli, Schuster	4, 5	
9, 17	103	Kiji, Cominelli, Park	9, 17	
10–12, 18, 19	103	Kiji, Cominelli, Park, Lindberg	10–12, 18, 19	
Overall Outcome			1–19	

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) (2018).

AFFIRMED