



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/208,918	08/12/2011	Glenn W. Kowald	P110044 (1718.163)	8989
134338	7590	11/23/2016	EXAMINER	
Bell Nunnally & Martin LLP 3232 McKinney Avenue, Suite 1400 Dallas, TX 75204			LAU, JASON	
			ART UNIT	PAPER NUMBER
			3743	
			MAIL DATE	DELIVERY MODE
			11/23/2016	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GLENN W. KOWALD and HANS J. PALLER

Appeal 2015-002960
Application 13/208,918¹
Technology Center 3700

Before BRUCE T. WIEDER, KENNETH G. SCHOPFER,
BRADLEY B. BAYAT, *Administrative Patent Judges.*

SCHOPFER, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

BACKGROUND

According to Appellants, “[t]his application is directed, in general, to furnaces and, more specifically, to igniting gas furnaces.” Spec. ¶ 1.

¹ According to Appellants, the real party in interest is Lennox Industries, Inc. Appeal Br. 2.

CLAIMS

Claims 1–20 are on appeal. Claim 1 is illustrative of the appealed claims and recites:

1. A controller for a multistage gas furnace, comprising:
an interface configured to receive a heating call; and
a corrosion reducer configured to ignite said gas furnace at a high fire operation based on if an indoor circulating fan of said gas furnace is active.

Appeal Br. 9.

REJECTION

The Examiner rejects claims 1–20 under 35 U.S.C. § 103(a) as unpatentable over Huggins² in view of Ballard,³ Lynch,⁴ and Evens.⁵

DISCUSSION

With respect to claim 1, the Examiner finds:

In regard to claim 1, Huggins discloses a controller (fig. 2A) for a multistage (abstract) gas furnace, comprising: an interface configured to receive a heating call (50, fig. 2A) EXCEPT a corrosion reducer configured to ignite said gas furnace at a high fire operation based on if an indoor circulating fan of said gas furnace is active. Ballard discusses in the Background section that it is desirable to have a continuous circulation fan mode (i.e., indoor circulating fan is active at ignition) because of improved fuel economy and to make better use of electrostatic air cleaners (col. 1, lines 44-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huggins to include a continuous indoor circulating fan mode to improve fuel economy and to make better use of

² Huggins et al., US 2005/0092317 A1, pub. May 5, 2005.

³ Ballard et al., US 4,891,004, iss. Jan. 2, 1990.

⁴ Lynch, US 5,027,789, iss. July 2, 1991.

⁵ Evens et al., US 5,666,889, iss. Sept. 16, 1997.

electrostatic air cleaners. One drawback of running the circulation fan at ignition and during warm up is that it takes the heat exchanger a longer time to warm up. This is because the circulated air draws heat away from the heat exchanger. A longer warm up time leads to increased condensation and corrosion (see col. 1, lines 60-64 in the Background section of Lynch as evidentiary support). Evens solves this problem by teaching the known technique of using a corrosion reducer configured to ignite said gas furnace at a high fire operation (bottom of abstract). Given the above reasons, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Huggins to include a corrosion reducer configured to ignite said gas furnace at a high fire operation based on (based on a determination whether the fan is active) if an indoor circulating fan of said gas furnace is active. The motivation to combine is to reduce corrosion in the heat exchanger due to excessive condensation build up during a continuous circulation fan mode.

Final Act. 2–3. The Examiner relies on similar reasoning for rejecting each of independent claims 8 and 15, the only other independent claims on appeal. *See id.* at 5–7.

Appellants argue, *inter alia*, that the rejection lacks an articulated reasoning with a rational underpinning to support the conclusion regarding obviousness. *See* Appeal Br. 4. For the reasons discussed below, we agree.

As an initial matter, we find that the broadest reasonable construction of the claims, when read in light of the Specification, requires that the furnace is ignited at a high fire setting when a determination is made that the fan is on. *See, e.g.* Spec 12 (“The disclosure provides an ignition routine that selectively lights a furnace at high-fire when the indoor circulating fan of the furnace is active (*i.e.*, is on or operating.”)). With respect to the rejection before us, we find that the Examiner has not identified any teaching in the prior art of determining a status of the circulating fan and making a

decision based on that status as this interpretation requires. More specifically, under the construction of the claim provided above, the Examiner has not shown that it was known in the art to base a decision on a determination that the fan is on.

Further, the Examiner's conclusion lacks the required rational underpinning in so far as the Examiner has not provided an adequate reason why one of ordinary skill in the art would have been led to the claimed configuration. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Specifically, we find that the Examiner's ultimate conclusion that the combination of art renders the claim obvious does not follow from the reasoning providing for combining each reference. The Examiner relies on Ballard to show that a continuous fan mode was known in the art, and thus, presumably it was known that the fan may be running when the furnace is ignited. The Examiner then relies on Lynch and Evens to show that condensation and resulting corrosion were known issues and that it was known to run the furnace at a high fire operation when it is ignited to reduce condensation. However, we find that these teachings, at best, would suggest running the furnace in a high fire mode on ignition every time, regardless of whether the circulating fan were on or off. The Examiner has not explained how operating in a high fire mode every time meets the claim language or provided any reason to otherwise conclude that one of ordinary skill would have found it obvious to run the furnace in a high fire mode after a determination has been made that the circulating fan is on. In short, while the Examiner's reasoning addresses why it would have been obvious to run the fan at all times, the Examiner's reasoning does not address why it would

Appeal 2015-002960
Application 13/208,918

have been obvious to make a determination based on the status of the fan as claimed.

Based on the foregoing, we do not sustain the rejection of any of independent claims 1, 8, and 15 or the rejection of dependent claims 2–7, 9–14, and 16–20.

CONCLUSION

For the reason set forth above, we REVERSE the rejection of claims 1–20.

REVERSED